ADENDDUM #2 TO THE INSTITUTIONAL CATALOG 2023-2024

Effective on June, 2024

COLUMBIA
CENTRAL UNIVERSITY

Addendum to the Institutional Catalogue 2023-2024

The following amendments have been made to the 2023-2024 Columbia Central University (CCU) Institutional Catalog. These changes have been aligned with revisions to administrative policies and processes, and they present the latest curricular updates to be implemented. The amendment to the accreditation statement of Columbia Central University before the Middle States Commission on Higher Education was made in compliance with changes in the disclosure policy of the latter, and the statement of educational services to veterans was revised. In addition, the narrative of the service offered by the Treasury Office was revised to eliminate the retention of students' credit transcripts until they pay off their financial responsibilities to the university, the Admissions Policy was amended, and the Definitions of the Academic Year and the Policy on the Definition of Credit Hours were revised due to changes in the equivalence of credit hours of the certificates offered at CCU.

The Institutional Grants Policy was also presented. Furthermore, curricular revisions for the following academic programs have been made; Bachelor's Degree in Information Technology, Networking and Security; Associate Degree in Cyber Security; and the Technical Certificates of Veterinary Assistant, Veterinary Assistant with Pet Grooming, and Professional Pet Grooming. Finally, the college's cost changes, effective July 1, 2024, are also displayed.

Page 20, The CCU accreditation, licensure and eligibility status narrative is modified.:

ACCREDITATIONS, LICENSES AND ALLIANCES

Columbia Central University is an accredited institution and a member of the Middle States Commission on Higher Education (MSCHE or the Commission) www.msche.org. Columbia Central University's accreditation status is Accreditation Reaffirmed. The Commission's most recent action on the institution's accreditation status was on June 22, 2023, to reaffirm accreditation. MSCHE is recognized by the U.S. Secretary of Education to conduct accreditation and pre-accreditation (candidate status) activities for institutions of higher education including distance, correspondence education, and direct assessment programs offered at those institutions. The Commission's geographic area of accrediting activities is throughout the United States.

Columbia Central University holds an institutional license from the Puerto Rico Board of Postsecondary Institutions (JIP) under Certification Number 2021-155. This board governs educational standards in Puerto Rico. Additionally, Columbia Central University (CCU) is approved by the Puerto Rico State Approving Agency to provide academic training to the students under the various GI Bill® programs. GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA).

The Office of Vocational Rehabilitation also acknowledges CCU as a provider of educational services. The availability of academic programs may vary based on the approvals or recognitions held by CCU locations from the regulatory agencies mentioned above.

Page 34, We proceed to modify the narrative of the service offered by the CCU Bursar's Office:

Treasury Office

The Bursar's Office is responsible for collecting the money billed to the student for tuition, fees and other related services. It orients and offers the student a payment plan, in which the student commits to the university to pay off the balance before the next enrollment.

In addition, the work-study program checks are delivered, loan checks are endorsed, and students who participate in the study benefits are oriented. Also, this office collects payments from students and/or graduates requesting official documents, such as diplomas and official credit certificates, among others. Payments to the University can be made in cash, check or money order payable to Columbia Central University; credit cards such as Visa and Master Card, ATH and Telepago from Banco Popular de Puerto Rico are also accepted.

Page 37- 45, The narrative of the CCU Admissions Policy is modified:

ADMISSIONS POLICY

Introduction

Columbia Central University (CCU) gives people the opportunity to continue undergraduate and graduate studies through our certificate, associate, baccalaureate, and master's degree programs. Anyone interested and who can benefit from continuing their studies at our university must meet the established admission requirements. Once people complete and comply with the admission process, they will be able to begin their studies in the selected program that will lead them to become professionals in the chosen discipline.

Our admission policy requires a high school diploma or its equivalent (for undergraduate programs), and graduation from a bachelor degree program for graduate programs. CCU welcomes applications for admission from students who are studying or have studied in other post-secondary educational institutions, which are duly authorized and/or accredited to operate in Puerto Rico and the United States, as well as those of recognized foreign institutions.

This policy provides individuals the opportunity to continue postsecondary studies through our various academic programs. The university does not exclude participation, nor does it deny benefits, nor does it discriminate against any person based on race, sex, color, birth, sexual orientation, origin, or social condition, physical or mental handicap, or because of political, religious, social, or union ideals.

Admissions Office

The Admissions Office is responsible for offering clear and complete information about academic programs to any person interested in attending the University. Among the main information that is given to the prospective student is the curriculum for the program of

interest, the admission requirements to be completed, practice requirements and licensure disclosures (if applicable), and the eligibility criteria to apply for licensure and/or licensure exams per board review requirements (if applicable), among other documents. In addition, the interested party is directed to go through the Financial Aid Office and the Bursar's Office to receive all the information about the available financial aid, if he/she qualifies, and about the alternative payment methods.

GENERAL ADMISSION REQUIREMENTS

Certificate and undergraduate level admission

To be admitted as a regular student at CCU, each applicant must meet the following requirements and documents:

1. Complete the admission application and sign it.
2. Be a high school graduate or have the recognized equivalent preparation:
    a. High school completion must be verified by submitting a high school transcript or diploma. A student who cannot provide a high school transcript or a copy of his/her diploma because the school closed may be permitted to provide a signed affidavit of high school completion. Such exceptions are only allowed in the most exceptional cases and must be reviewed and approved by the Academic Opportunity Program.
    b. Documentation of successful completion of the general education development (GED) or other state sanctioned test or diploma equivalency certificate is accepted as equivalent to high school completion.
    c. If the student is transferring from another post-secondary institution, a college transcript documenting completion of 1) an associate's degree 2) successful completion of at least 60 semester or trimester credit hours or 72 quarter credit hours that does not result in the awarding of an associate's degree, but that is acceptable for full credit toward a bachelor's degree at any institution or 3) enrollment in a bachelor's degree program where at least 60 semester or trimester credit hours or 72 quarter credit hours have been successfully completed, including credit hours transferred into the bachelor's degree

program.

d. Documentation of completion of home schooling at the secondary school level (additional details below under "Admission of Homeschooling Students").

3. The student must have earned a minimum grade point average of 2.00 or more in high school or from the postsecondary institution they are transferring from. Those students who do not meet the required GPA of 2.00, may be eligible for admission as regular students under the "Academic Opportunity Program" (POA). (See Academic Opportunity Program Policy published in the institutional catalog).
4. If the student cannot present a transcript or the results of the equivalency exam, the high school diploma will be accepted, and a true and exact copy of the original diploma will be taken by college personnel as evidence of the high school degree or Graduation Certification (original document, not copy). These students are admitted as a student under the POA, since we will not have a way to document the GPA earned in high school.
5. Students who have graduated from a high school outside of Puerto Rico and the United States must submit evidence of their academic credentials validated by the Puerto Rico Department of Education.
6. Students under 18 years of age must be accompanied by their parents or their sponsors when completing the admissions process.
7. For programs in which there is an internship component or in which there is a requirement to request the revalidation exam of the Examining Boards, the prospect must be 18 years of age or older by the time the requirement applies.
8. Submit the Certificate of Vaccines by the Department of Health (students under 21 years of age), in compliance with Law 25 on School Immunization of PR. See Immunization Policy published in the Institutional Catalog.

Admission to the Graduate Level for New Students and CCU Graduates

To be admitted as a regular student to a graduate program at CCU, each applicant must meet the following requirements and documents:

1. File an application for admission, which can be obtained at the Admissions Office or

Graduate Program Office. Students who have graduated from CCU will also have to file an application for admission to the preferred graduate program.

2. Submit one (1) copy of the valid credit transcript(s) of the institution where the baccalaureate degree or higher was completed. The corresponding university where the baccalaureate was obtained must have proper authorization and/or accreditation.
3. Submit three (3) letters of recommendation from 3 people who can offer an opinion about the candidate's chances of success in graduate studies. See forms included in the application.
4. International students must provide the transcript, diploma or degree received with their grades and grade point average must be submitted. Said transcript must be approved by an agency accredited by NACES (National Association of Credential Evaluation Services) and must include course by course, average and grade awarded, if any.

Specific admission requirements for Master's Degrees for new students and graduates of undergraduate programs at CCU:

Master's in Business Administration

- Have a 2.50 cumulative baccalaureate grade point average. Students interested in being admitted who have a lower grade point average, refer to the POA.

Master's in Nursing Science

- Have a 2.75 cumulative baccalaureate grade point average. Students interested in being admitted and having a lower grade point average, refer to the POA.
- Have a Bachelor's Degree in Nursing
- Present evidence of a current license as a general nurse

Admission requirements at the graduate level under the Non-Residential(distance) modality, in addition to the aforementioned requirements, the applicant must:

- Distance education students enrolled in graduate programs must be residents of Puerto Rico. Prospective students must present the university with a copy of an identity document from the state which proves their identity and residence. At the time of the interview, this document can be sent by email.
- Later, to validate the registration, the same document in a copy legalized by a notary of the city in which you reside must be sent. This document must be the National Identity Document (DNI), identification issued by the state or country of origin or a valid unexpired passport. If an applicant can visit the CCU offices personally, they have the option of presenting their identification and validating it at our offices without notarization.

Verification of High-School Documents in the Admission Process for Puerto Rico students

CCU, as part of its admission policy, verifies the origin of the document evidencing that a student has graduated from high school.

The admissions officer will use the document provided by the Board of Postsecondary Institutions (or the appropriate predecessor or successor agency), which indicates the school's license date, to determine if the high school was licensed when the student graduated. If the school was licensed when the student graduated, the documentation of high school completion is accepted. If the school was not licensed at the time the student graduated, the student is directed to consult with the school. If the school was not registered/licensed at the time the student graduated, the student will not be admitted to the University.

In those cases that the documents presented by the student for validation reflect inconsistencies in identity or difference in name as provided in the admission application, the corresponding verification will be carried out, guaranteeing that no discrimination against any person based on race, sex, color, birth, sexual orientation, origin, or social condition, physical or mental handicap, or because of political, religious, social, or union ideas is met. Given this, they must submit:

- Affidavit certifying the change in name.

Verification of High School Documents in the Admission Process for students from Accelerated Schools

CCU, as part of its admission policy, verifies high school graduation documents in the admission process for students from accelerated schools in Puerto Rico. This policy applies to all incoming students who earned their high school diploma from an accelerated school and do not provide documentation of a recognized equivalent to a high school diploma.

Through the established procedure, the following will be verified:

1. The validity of the license of the accelerated school from which the student comes.
2. The year the accelerated school diploma was awarded.
3. That the students from said schools completed their studies according to the applicable requirements according to the Board of Postsecondary Institutions (or the appropriate predecessor or successor agency).

Documents to be delivered by the student from an accelerated school:

1. Accelerated school credit transcript.

Once the documents delivered by the student have been verified and validated, their admission to the institution will be determined.

High school credentials of questionable validity

All high school diplomas and/or transcripts submitted by prospective and admitted students are individually reviewed by admissions officers. If CCU has any reason to question the validity of a student's documentation of high school completion, the admissions officer will check with the high school to confirm the validity of the student's diploma and will confirm with the relevant department or agency in the state in which the secondary school is located (including via a published list) that the secondary school is recognized as a provider of secondary school education. A student's self- certification of high school graduation is not sufficient to validate a questionable high school credential.

Admission of Homeschooling Students

Students from homeschooling may apply to CCU in three ways:

1. Present evidence of having completed a program of study equivalent to high school graduation in Puerto Rico. The equivalency must be certified by the Puerto Rico Department of Education. The equivalence of the academic index obtained must meet the minimum requirement of 2.00.
2. If there is no certification from the Puerto Rico Department of Education, the student's parent or guardian will present:
    a. Credit transcript: the person or entity that certifies home studies will prepare a transcript of the courses completed by the student. It should include the name of the course, period in which the course was taken, and grade obtained. The student must complete all courses required by the Puerto Rico Department of Education to complete High School.
    b. Affidavit that highlights that the student completed their studies through the home learning modality (homeschooling).
3. If the completed a program of study equivalent to high school graduation in the United States or a foreign company, the student must submit their transcripts to the National Association of Credential Evaluation Services (NACES) for evaluation. NACES will confirm if the student's program of

study is equivalent to high school completion.

Requirements for Admission for Professional Improvement

A Professional Improvement (PI) student is one who is interested in taking certain courses, without being enrolled in an academic program at the University. The most frequent reasons for this type of request are for continuing professional education purposes or to request transfer credits to another university. PI students are not eligible for financial aid. The requirements for admission as a PI student are:

- Submit a duly completed application for admission.
- Full payment of the admission application fee.

Transfer Credit

CCU will accept transfer credits from postsecondary institutions authorized and/or accredited by an agency recognized by the United States Department of Education and legitimate foreign institutions, as determined by CCU. The courses completed in the institution of origin will be considered individually for validation; CCU reserves the right to determine the awarding of transfer credit for courses completed at other institutions.
For more details, refer to the Course Validation Policy.

- For students at the graduate level, transfer credit hours will be accepted up to a maximum of 18 credits. Ordinarily, completed courses with a grade of less than B will not be accepted as transfer credits. Courses accepted in transfer will not be considered to compute the student's grade point average at CCU.
- For students with professional experience who are applying to the Master of Business Administration Program, CCU offers the opportunity to consider and credit the knowledge and skills acquired through their professional work experience, as established by the PROSIGUE alternative. Through this alternative, a maximum of 18 credits can be awarded. At the undergraduate level, a student can also be awarded credits for professional experience (residency requirements apply)

In case of institutions that have ceased functions and therefore it is impossible to obtain a credit transcript, the student may submit a student credit transcript or any other document that attests to their completed courses for consideration by CCU, provided they are supported by an affidavit. However, CCU reserves the right to validate said knowledge through its evaluation instruments prior to the acceptance of transfer credit. This provision applies only to undergraduate programs.

The student with veterans benefits and/or their beneficiaries, having studied at any post-secondary or university institution, will be required to present the credit transcript of the institution of origin, in order to qualify for the educational benefits of the Veterans Administration. If the credit transcript is not presented, CCU will not be able to certify it to the Veterans Administration.

Special cases - "Experiential Learning"

- People who have acquired knowledge through other means, other than traditional academics, and wish to have it considered for academic credit, should request guidance regarding this at the Admissions Office, so that it can be referred to the Dean of Academic Affairs.
- In those cases that present evidence of having completed the parts of the Mathematics, English and/or Spanish with 560 points or more on the College Board, the course will be validated according to their study program, regardless of whether they come from high school or transfer.

Residency Requirements

Graduate programs: Regardless of how many credits a student can obtain through transfer, professional experience, or other methods accepted by the academic community, each student must complete at least 21 credit hours in their study program in residence within CCU.

Undergraduate programs: Regardless of how many credits a student may obtain through transfer, professional experience, or other methods accepted by the academic community, each student must complete at least 24 credit hours credited towards their program of study in residence within CCU.

For certificate or associate degree programs, these credits in residence must include at least 12 credit hours in the student's area of specialization. Students enrolled in a baccalaureate program must complete at least 24 credit hours in residency in their area of specialization or related courses, except in the Bachelor of Science program in Nursing RN to BSN, in which at least 18 credit hours must be completed in the student's area of expertise or related courses.

Notification of Admission

All applicants will be informed in a timely manner about the institution's decision regarding their admission to the university, through a letter from the Admissions Office.

Acceptance to the university and an educational program does not authorize the applicant to begin classes unless all required documentation has been submitted or an extension has been granted to submit the documents.

Other Conditions for Admission

A student who does not have an application accompanied by all the required documents will have a period of 30 days after classes begin to submit the missing documents. The Recruitment and Admissions Officer will notify the student of the documentation that is needed to complete their file and the deadline for its delivery. Such a student is considered to be conditionally admitted and financial aid will not be disbursed to the student until all admission requirements have been satisfied.

If the student does not deliver the required documentation in the specified period, the enrollment will be canceled, and the student will be dropped from the University.

Page 65- 66, Proceed to amend the definition of Academic Year and the CCU Credit Hour Definition Policy:

DEFINITION OF ACADEMIC YEAR

An academic year is equivalent to a period of two terms (semesters of approximately four (4) months each). Each academic term may have modules of eight (8) or sixteen (16) weeks. The academic calendar is published at the beginning of each academic term on the web page.

POLICY ON THE DEFINITION OF CREDIT HOURS

Introduction

Credit hours are the basic unit the federal government uses to determine the amount of funds a student is eligible for under Title IV financial aid programs. To prevent fraud and abuse when using financial aid, the United States Department of Education establishes, effective July 1, 2011, determined that there must be a federal definition of credit hours, which serves as a standard for all educational institutions to develop their own definition to be used in all the courses they offer. For such purposes, and in compliance with the regulation 34CFR 600.2 of October 29, 2010, the Office of the Vice President for Public Affairs Academics have established the Policy on the definition of credit hours.

Applicability

This policy applies to all programs offered by CCU on its campuses, regardless of their level or type of studies.

Definition of Credit Hours

CCU defines credit hours as the amount of work represented in expected learning outcomes, which are evidenced by student achievement. For the associate, baccalaureate, and master's degree levels, the unit of measurement used to calculate credit hours is the Carnegie Unit, which states that 1 credit is equal to 15 hours of theoretical instruction or 30 hours of laboratory or 45

hours of practice. To calculate the approximate time of the amount of work that will be done outside the classroom, the Carnegie Unit establishes that each hour of theoretical class is equivalent to a minimum of 2 hours of homework outside the classroom.

For the certificate level, the unit of measurement used to calculate credit hours is the U.S. Department of Education's definition of "conversion of clock hours to credit hours": a semester/quarter hour must include at least 30 clock hours of instruction.

General Dispositions

1. The definition of credit hours will be used to develop new programs and develop the course schedule.

2. Evidence of compliance with the amount of work represented by the expected learning outcomes for all programs and levels, regardless of the study modality, will be evidenced by the faculty in the student's grade register as the Supplementary Independent Component (CIS).

3. Every professor who has an assigned course will ensure compliance with the credit hours and will use the instruments established by the program or identified in the syllabus for such compliance.

4. The syllabi of all courses in the programs will specify the number of contact hours for the CIS in the General Information (under Contact Hours) and Methodology sections, as established in the Guide to the Syllabus. Each student's CIS will be evaluated in each academic term and a grade will be assigned. At the end of each academic term, the faculty will include the CIS grade in the grade register, as one of the evaluation criteria for the course.

5. The syllabi of all courses of all certificate level programs will reflect the number of contact hours of the CIS in the General Information (under Contact Hours) and Methodology sections, as established in the Syllabus Guide. At the end of each academic term, the faculty will include the CIS grade in the grade register, as one of the evaluation criteria for the course.

The Institutional Grants Policy for CCU has been added:

INSTITUTIONAL GRANTS

This policy applies to all students who enroll at any Columbia Central University (CCU) location and meet the eligibility criteria of the grant for which they are applying. Students may participate in these grants, regardless of whether they receive other (non-institutional) financial aid, as long as they comply with the requirements established in this policy.

Students applying for any financial aid administered by CCU are required to report any additional external financial aid they expect to receive to fund their studies (Veterans, Vocational Rehabilitation, Americorps, etc.).

The application is available and must be submitted to the Financial Aid Office. Applications will be evaluated on a first-come, first-served basis, so CCU encourages you to apply early, as funds available for these grants are limited. CCU will disburse the amount of the grant awarded at the end of the academic semester for which the funds were allocated.

These grants are not available to students enrolled in continuing education courses. Students may only participate in one institutional grant.

Institutional Grant: High School Senior 2024

To be eligible, students must meet the requirements described below:

1. Complete the Institutional Scholarship Application on or before October 31, 2024,
2. Enroll and attend a program offered at any CCU location on or before October 31, 2024,
3. Have not previously enrolled in any of our locations,
4. Maintain satisfactory academic progress,
5. Complete all courses enrolled in each semester of their first academic year,
6. Be a High School graduate and have completed High School or the equivalent in the

year2024.

The grant will be awarded in the first academic year and the amount to be awarded will be determined based on the program as detailed below:

1. $800.00 to students enrolled in a Diploma program,
2. $1,000.00 to students enrolled in an Associate degree program,
3. $1,500.00 to students enrolled in a Bachelor or Master's degree program.

The amount awarded will be disbursed per term. The amount to be disbursed per term will be determined by dividing the amount of the grant by the terms of the academic year. For example, a student enrolled in a program divided into semesters will receive two disbursements in their first academic year.

Institutional Grant: High School Senior

The High School Senior grant awards $200.00 to students enrolled in programs leading to a diploma and $300.00 to students enrolled in programs leading to an associate or bachelor's degree. The grant applies to the first semester of study. An additional $200.00 will be awarded to students who demonstrate evidence of having completed high school with a cumulative GPA of 3.2 or higher.

To be eligible, students must meet the requirements described below:

1. Completed high school in the year admitted to CCU,
2. Complete the Institutional Grant Application before the end of their first semester,
3. Be a resident of Puerto Rico and/or enrolled in CCU,
4. Maintain satisfactory academic progress,
5. Complete all courses enrolled in the first semester of studies.

Institutional Grant: Healthcare Heroes

The Healthcare Heroes grant awards $200.00 to students enrolled in programs leading to a diploma and $300 to students enrolled in programs leading to an associate, bachelor's, or master's degree. The grant applies to the first semester of study. An additional $200.00 will be awarded to students who are ineligible for the maximum Federal Pell Grant amount due to reaching the maximum lifetime eligibility for this grant.

To be eligible, students must meet the requirements described below:

1. Enroll in one of the health-related programs,
2. Complete the Institutional Grant Application before the end of their first semester,
3. Be a resident of Puerto Rico and enrolled in CCU,
4. Maintain satisfactory academic progress,
5. Complete all courses enrolled in the first semester of studies.

Institutional Grant: "Creciendo Contigo"

The "Creciendo Contigo" grant awards $200.00 to students enrolled in programs leading to a diploma and $300.00 to students enrolled in programs leading to an associate, bachelor's, or master's degree. The grant applies to the first semester of study. An additional $200.00 will be awarded to students who are ineligible for the maximum Federal Pell Grant amount due to reaching the maximum lifetime eligibility for this grant.

To be eligible, students must meet the requirements described below:

1. Enroll in a new program after previously completing a program at one of CCU's locations or
2. Re-enroll in a program previously initiated that was not completed in any of the CCU locations.
3. Complete the Institutional Grant Application before the end of their first semester,

4. Be a resident of Puerto Rico,
5. Maintain satisfactory academic progress,
6. Complete all courses enrolled in the first semester of studies.

Institutional Grant: "Por ti, Contigo"

The “Por ti, Contigo” grant awards $200.00 to new students enrolled in programs leading to a diploma and $300 to new students enrolled in programs leading to an associate, bachelor's, or master's degree. The grant applies to the first semester of study. An additional $200.00 will be awarded to students who are ineligible for the maximum Federal Pell Grant amount due to reaching the maximum lifetime eligibility for this grant.

To be eligible, students must meet the requirements described below:

1. Be a new student,
2. Complete the Institutional Grant Application before to the end of their first semester,
3. Be a resident of Puerto Rico and enrolled in CCU,
4. Maintain satisfactory academic progress,
5. Complete all courses enrolled in the first semester of studies.

Page 203-210, Changes to the CCU School of Technology's Bachelor of Science in Information Technology, Networking and Security are disclosed.

BACHELOR'S DEGREE IN INFORMATION TECHNOLOGY, NETWORKS, AND SECURITY

CIP Code: 11.1001

SOC Code: 11-3021, 15-1212, 15-1231, 15-1241, 15-1244

Credits: 120 credits

Duration: 144 weeks (Three years)

Location: Caguas and Yauco

Modality of Study: On ground (Caguas) and Online (Caguas & Yauco)

The bachelor's degree in Information Technology, Networks, and Security will prepare students for the processes of installation, diagnosis, and repair of personal computers and their devices, in accordance with the demands of the current market. Students will apply knowledge and skills for the design and configuration of a telecommunications network infrastructure in an organization. Additionally, they will develop competencies in the maintenance and diagnosis of problems in networks for the optimization of communication systems. They will apply offensive and defensive security techniques, as well as forensic analysis, for the development of optimal security systems that comply with relevant regulations and requirements. They will also identify threats that a company may face to conduct risk analysis and vulnerability testing through ethical hacking techniques, with the aim of preventing and mitigating risks and restoring information systems. As part of the program, students will take review courses for the CompTIA A+, Network+, and Security+ certifications. Graduates of this program will be able to work as computer support technicians, information technology (IT) specialists, or information systems managers.

PROGRAM COMPETENCIES

1. Develop specialized competencies in network technology and information security for the design, implementation, and maintenance of secure and reliable network infrastructures.

2. Demonstrate skills in project management related to the design, configuration, administration, and security of servers and networks in business environments.

3. Effectively communicate security and network design proposals for physical and virtual infrastructures to diverse audiences, both orally and in writing, in Spanish and English.

4. Apply logical and critical reasoning in the development of creative and innovative solutions to problems related to network infrastructure and information system security.

5. Develop solutions for incidents related to networks and information system security, in an ethical and moral manner, considering confidentiality, integrity, and respect for the privacy of information.

6. Demonstrate skills in collaborating with multidisciplinary and diverse teams, as well as effectively integrating a variety of perspectives, skills, and knowledge from team members in solving challenges in network administration and information system security.

Additional program requirement:

1. Orientation with the Academic Coordinator

Graduation Requirements:

1. Have completed at least 120 credits, including those taken at CCU and those transferred from other institutions or programs.
2. Have achieved a minimum average of 2.50 in the Concentration courses.
3. Have achieved a minimum GPA of 2.25.
4. Of the 24 credits that must be approved at the Institution, 12 will be in the Concentration area.

CURRICULAR STRUCTURE

GENERAL EDUCATION COURSES

Prescribed: 40 credits

COURSE	CODE	COURSE NAME	CONTACT HOURS	CREDITS
BISC	1010	Biological Sciences	45	3
ENGL	1010	Basic English I	45	3
ENGL	1020	Basic English II	45	3
ENGL	2050	Conversational English	45	3
HUMA	1010	Humanities I	45	3
HUMA	1020	Humanities II	45	3
ITTE	1031L	Computer Literacy and Laboratory	60	3
MATH	1010	Basic Mathematics	45	3
SEMI	1010	Transition to University Life and Professional Training Seminar	15	1
SOSC	1010	Social Sciences I	45	3
SOSC	1020	Social Sciences II	45	3
SPAN	1010	Basic Spanish I	45	3
SPAN	1020	Basic Spanish II	45	3
SPAN	2040	Writing and Composition	45	3
Sub-Total:			**615 hours**	**40 credits**

CORE COURSES

Prescribed: 51 credits

COURSE	CODE	COURSE NAME	CONTACT HOURS	CREDITS
CISE	1000L	Fundamentals of Cybersecurity and Laboratory	60	3
CISE	1050	Information Systems Auditing	45	3
COMP	1000L	Components of Personal Computers and Laboratory	60	3
COMP	1050L	Installation of Servers and Laboratory	60	3
COMP	2000L	Diagnosis and Repair of Computers and Laboratory I	60	3
COMP	2010L	Diagnosis and Repair of Computers and Laboratory II	60	3
COMP	2070	CompTIA A+ Certification Exam Review	45	3
COMP	2080L	Fundamentals of Cloud Computing and Laboratory	60	3
COMP	3050	CompTIA Security+ Certification Exam Review	45	3
INTE	1040	Information Technology Project Management	45	3
INTE	1100L	Open Source Operating Systems and Laboratory	60	3
INTE	1200L	Fundamentals of Operating Systems and Laboratory	60	3
INTE	2440L	Network Fundamentals and Laboratory	60	3

COURSE	CODE	COURSE NAME	CONTACT HOURS	CREDITS
INTE	2470L	User Support Technician and Laboratory	60	3
MATH	2050	Applied Mathematics	45	3
PROG	1035L	Introduction to Computer Programming Logic and Laboratory	60	3
PROG	2400L	Scripting Languages and Laboratory	60	3
PROG	3360L	Phython Programming and Laboratory	60	3
Sub-total:			**960 hours**	**51 credits**

CONCENTRATION COURSES

Prescribed: 29 credits

COURSE	CODE	COURSE NAME	CONTACT HOURS	CREDITS
CISE	2000L	Offensive and Defensive Security and Laboratory	60	3
CISE	3000L	Ethical Hacking and Laboratory	75	4
CISE	3050L	Forensic Analysis and Laboratory	60	3
COMP	2050L	Design and Configuration of Servers and Laboratory	60	3
COMP	3000	CompTIA Network+ Certification Exam Review	45	3
COMP	3050	CompTIA Security+ Certification Exam Review	45	3
COMP	3070L	Server Administration and Laboratory	60	3
INTE	2770L	Diagnosis and Maintenance of Networks and Laboratory	60	3
INTE	4000L	Information Technology Seminar and Laboratory	75	4
Sub-total:			**540 hours**	**29 credits**

The curricular structure of the bachelor's degree in Information Technology, Networks, and Security includes the following components:

COMPONENT	HOURS	CREDITS
General Education Courses	615	40
Core Courses	960	51
Concentration Courses	540	29
Total	**2,115**	**120**

BACHELOR'S DEGREE IN INFORMATION TECHNOLOGY, NETWORKS, AND SECURITY

CURRICULUM: JUNE 2024

CURRICULUM SEQUENCE

COURSE	CODE	COURSE NAME	PRE REQUISITES	CREDITS
FIRST TERM: 15 CREDITS				
COMP	1000L	Components of Personal Computers and Laboratory	-----	3
SPAN	1010	Basic Spanish I	-----	3
MATH	1010	Basic Mathematics	-----	3
SOSC	1010	Social Sciences I	-----	3
ITTE	1031L	Computer Literacy and Laboratory	-----	3
SECOND TERM: 13 CREDITS				
SPAN	1020	Basic Spanish II	ENGL 1010	3
INTE	1100L	Open Source Operating Systems and Laboratory	COMP 1000L	3
SEMI	1010	Transition to University Life and Professional Training Seminar	-----	1
PROG	1035L	Introduction to Computer Programming Logic and Laboratory	-----	3
INTE	1200L	Fundamentals of Operating Systems and Laboratory	-----	3
THIRD TERM: 12 CREDITS				
ENGL	1010	Basic English I	-----	3
INTE	2440L	Network Fundamentals and Laboratory	INTE 1100L	3
MATH	2050	Applied Mathematics	MATH 1010	3
BISC	1010	Biological Sciences	-----	3
FOURTH TERM: 12 CREDITS				
ENGL	1020	Basic English II	ENGL 1010	3
COMP	1050L	Installation of Servers and Laboratory	COMP 1000L INTE 1100L	3
CISE	1000L	Fundamentals of Cybersecurity and Laboratory	-----	3
COMP	2000L	Diagnosis and Repair of Computers and Laboratory I	COMP 1000L	3

FIFTH TERM: 15 CREDITS				
COMP	2010L	Diagnosis and Repair of Computers and Laboratory II	COMP 2000L	3
ENGL	2050	Conversational English	ENGL 1020	3
INTE	2470L	User Support Technician and Laboratory	COMP 1000L	3
HUMA	1010	Humanities I	-----	3
COMP	2050L	Design and Configuration of Servers and Laboratory	COMP 1050L	3
SIXTH TERM: 12 CRÉDITOS				
PROG	2400L	Scripting Languages and Laboratory	PROG 1035L	3
SPAN	2040	Writing and Composition	SPAN 1020	3
CISE	1050	Information Systems Auditing	CISE 1000L	3
COMP	2070	CompTIA A+ Certification Exam Review	INTE 2470L	3
SEVENTH TERM: 15 CREDITS				
INTE	2770L	Diagnosis and Maintenance of Networks and Laboratory	INTE 2440L	3
SOSC	1020	Social Sciences II	SOSC 1010	3
COMP	2080L	Fundamentals of Cloud Computing and Laboratory	COMP 1050L INTE 2440L	3
CISE	2000L	Offensive and Defensive Security and Laboratory	CISE 1000L	3
COMP	3000	CompTIA Network+ Certification Exam Review	INTE 2770L	3
EIGHTH TERM: 13 CREDITS				
CISE	3000L	Ethical Hacking and Laboratory	CISE 1050 CISE 2000L	4
PROG	3360L	Phython Programming and Laboratory	PROG 1035L	3
CISE	3050L	Forensic Analysis and Laboratory	CISE 1000L CISE 1050 CISE 2000L	3
HUMA	1020	Humanities II	HUMA 1010	3

NINTH TERM: 13 CREDITS				
COMP	3050	CompTIA Security+ Certification Exam Review	CISE 1050 CISE 2000L	3
COMP	3070L	Server Administration and Laboratory	COMP 2050L	3
INTE	1040	Information Technology Project Management	-----	3
INTE	4000L	Information Technology Seminar and Laboratory	CISE 2000L CISE 3000L CISE 3050L COMP 2050L COMP 3000 COMP 3070L INTE 2770L	4

Grand Total of the bachelor's degree in Information Technology, Networks, and Security: 120 credits and 2,115 hours

** The student does not necessarily have to follow the suggested course order, but the order helps them complete their degree in the stipulated time. The student must be aware of taking the courses that have prerequisites in an order that allows them to continue taking the other courses without problems. Courses without prerequisites have no specific order. The student can register for them in the term that they are offered.

MINIMUM GRADING POLICY

Students enrolled in the bachelor's degree in Information Technology, Networks, and Security must obtain at least a grade of C upon passing all Core and Concentration courses, except the Information Technology Seminar and Laboratory (INTE 4000L) which must be passed with B or more.

COURSES DESCRIPTIONS

BISC 1010 - Biological Sciences
In this course, students will analyze the fundamental concepts and characteristics that distinguish living organisms, their evolutionary processes, and their interaction with other organisms and the environment. Furthermore, they will distinguish the essential aspects for the functioning and development of life. Students will explain the reproductive aspects of the cell and its genetic role. They will also examine different ecosystems and the effect caused by human intervention on the environment.

3 credits
Prerequisite: None
Corequisite: None

ENGL 1010 - Basic English I
In this course, the students will demonstrate proper use of the English language with a primary focus on syntax, grammar, punctuation, and spelling. Students will distinguish verb tenses in sentences and paragraphs. They will also produce clear, well-developed and well-organized sentences, messages, paragraphs, and short compositions using correct capitalization, punctuation and syntax. Students will also argue about various contexts, including reading and media materials on the Internet, short stories, and library resources.

3 credits
Prerequisite: None
Corequisite: None

ENGL 1020 - Basic English II
In this course, students will enhance their listening, reading, writing, and speaking skills in English as a second language. Students will demonstrate an understanding of grammar elements, literature, and the development of writing, reading, listening, and speaking skills. Also, they will apply critical thinking skills in reading and writing.

3 credits
Prerequisite: ENGL 1010
Corequisite: None

ENGL 2050 - Conversational English
In this course, students will improve their oral and written communication skills in English. They will review past, present, and future tenses to identify the grammatical rules applicable to affirmative, negative, and interrogative statements. In addition, they will evaluate English pronunciation and intonation. Students will apply these grammar, pronunciation, and intonation rules when addressing others in conversation. Furthermore, they will examine English idioms and determine when they are used based on context. Finally, they will

develop a persuasive idea that will showcase everything they have learned throughout the course.

3 credits
Prerequisite: ENGL 1020
Corequisite: None

HUMA 1010 - Humanities I
In this course, students will analyze the fundamental aspects of the evolution of humanity and the historical development of social, economic, political, religious, and cultural movements in the civilizations that influenced the Western world. Students will also evaluate the importance of the humanistic legacy and the vital values that led to the evolution and development of Western civilization. Furthermore, students will value the historical processes that shaped the legacy of the ancient and medieval Western civilization which are reflected in today's humanity.

3 credits
Prerequisite: None
Corequisite: None

HUMA 1020 - Humanities II
In this course, students will analyze the fundamental principles, impact, and transcendence of various philosophical and epistemological movements of the Western culture and their influence on current humanistic thinking from a multidisciplinary and interdisciplinary perspective. In addition, they will evaluate the periodization and characteristics of some political, religious, cultural, and scientific trends, as well as key values, traditions, and concepts that relate to today's society. They will also value the global influence of the legacy of Western culture by critically observing cultural and social transformations that occurred at different historical times from the Middle Ages to the 21st century.

3 credits
Prerequisite: HUMA 1010
Corequisite: None

ITTE 1031L - Computer Literacy and Laboratory
In this course, students will analyze the usefulness of email, institutional databases, and computerized systems in their learning process, considering aspects of academic integrity. In addition, they will examine fundamental concepts related to internet services, security, privacy, and ethics, as well as core aspects of assistive technology. Furthermore, they will demonstrate technological competencies in various application programs, cloud storage, and web pages.

3 credits
Prerequisite: None
Corequisite: None

MATH 1010 - Basic Mathematics
In this course, students will apply the characteristics of the set of real numbers and their uses in everyday life, as well as the concepts of ratio, proportion, and percentage. They will also solve everyday situations by applying the concepts of linear equations and inequalities in one variable and polynomials. In addition, students will use measurement concepts and conversion factors in professional and everyday problem solving.

3 credits
Prerequisite: None
Corequisite: None

SEMI 1010 - Transition to University Life and Professional Training Seminar
In this course, students will develop essential skills for their training and transition from university life to their entry into the workforce. They will participate in learning experiences aimed at enhancing self-knowledge and exploring the possibilities of university studies and career paths. In addition, they will explain the competencies sought by employers with the support of available resources. Likewise, they will establish successful strategies for making progress in their academic program and for planning and entering the job market.

1 credit
Prerequisite: None
Corequisite: None

SOSC 1010 - Social Sciences I
In this course, students will examine the fundamental concepts of the social sciences, starting with the evolution and development of society. They will analyze issues related to various disciplines that comprise the social sciences, such as anthropology, sociology, and psychology. They will also evaluate social issues by applying critical judgment to current social problems.
This course requires 10 hours of participation in community service learning activities.

3 credits
Prerequisite: None
Corequisite: None

SOSC 1020 - Social Sciences II
In this course, students will examine the disciplines of the social sciences, emphasizing the political, economic, and geographic issues affecting their social environment. Thus, they will investigate how these disciplines influence the current social changes that have shaped the

world we live in. In addition, they will analyze the social developments that have contributed to the establishment of political and economic systems worldwide. Finally, students will evaluate the effects of industrial development, urban growth, and environmental movements in geography, the environment, and sustainability.

3 credits
Prerequisite: SOSC 1010
Corequisite: None

SPAN 1010 - Basic Spanish I
In this course, students will examine the basic spelling, grammar, and syntax rules when expressing themselves orally or in writing. Students will analyze a variety of literary genres in a critical and reflexive way. They will also apply the linguistic rules that govern oral and written communication.

3 credits
Prerequisite: None
Corequisite: None

SPAN 1020 - Basic Spanish II
In this course, students will critically analyze different literary genres such as poetry, theater, and novels. They will describe and illustrate their evolution, development, and characteristics. Furthermore, they will analyze the elements that differentiate investigative journalism from in-depth journalism. Students will also recognize the importance of public speaking and discourse as resources for effective communication. In addition, they will write and present a speech.

3 credits
Prerequisite: SPAN 1010
Corequisite: None

SPAN 2040 Writing and Composition
In this course, students will analyze the main elements of communication and the methodology of planning, textualization, and review in the writing process. They will also integrate spelling and grammar into text composition. In addition, they will explain the elements and structure of the monograph and its relevance in the professional field. Finally, they will develop a monograph on a topic of their interest.

3 credits
Prerequisite: SPAN 1020
Corequisite: None

CISE 1000L Fundamentals of Cybersecurity and Laboratory
In this course, students will examine the fundamental principles of cybersecurity and the challenges associated with different types of cyberattacks and their motivations. Students will analyze the operational security processes, policies, standards, and procedures. In addition, they will select controls for risk management to protect systems and networks against cyberattacks. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits
Prerequisite: None
Corequisite: None

CISE 1050 Information Systems Auditing
In this course, students will apply the principles, practices, and techniques necessary for conducting audits and monitoring information systems. Likewise, they will identify information systems vulnerabilities to mitigate risks in the IT assets of an industry. Additionally, they will analyze data flow structures and control mechanisms established within information systems based on their industry and regulatory framework.

3 credits
Prerequisite: CISE 1000L
Corequisite: None

CISE 2000L Offensive and Defensive Security and Laboratory
In this course, students will analyze the regulatory framework of cybersecurity using strategies and tools for incident response planning. They will apply both offensive and defensive technological strategies and tools for configuring endpoint security (firewall), intrusion detection systems (IDS), and intrusion prevention systems (IPS) to counter emerging threats. They will design specific strategies to improve cybersecurity posture, address the evolving challenges of the threat landscape, and support the business continuity plan (BCP).

3 credits
Prerequisite: CISE 1000L
Corequisite: None

CISE 3000L Ethical Hacking and Laboratory
In this course, students will apply security analysis and evaluation techniques to identify vulnerabilities and weaknesses in computer systems. They will also analyze methodologies and tools to conduct penetration testing and assess system resilience against cyberattacks. In addition, they will evaluate preventive and corrective measures to strengthen the security of systems and networks. *This course includes the use of a simulator.*

4 credits
Prerequisites: CISE 1050, CISE 2000L
Corequisite: None

CISE 3050L Forensic Analysis and Laboratory
In this course, students will develop knowledge in the methodologies used for the investigation of computer security incidents and cybercrime. They will apply techniques for the identification, collection, and preservation of digital evidence in a forensic environment. In addition, they will prepare forensic reports for documenting the investigation process and results, evaluating vulnerabilities in systems and applications, and providing recommendations for incident resolution.

3 credits
Prerequisites: CISE 1000L, CISE 1050, CISE 2000L
Corequisite: None

COMP 1000L Components of Personal Computers and Laboratory
In this course, students will evaluate the types and characteristics of technological devices and components used in computers. They will choose appropriate cables and connectors for networks, devices, and peripherals, as well as the necessary components for assembling and configuring functional computer systems. Additionally, they will recommend options for device maintenance, enhancement, and security. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits
Prerequisite: None
Corequisite: None

COMP 1050L Installation of Servers and Laboratory
In this course, students will analyze concepts and processes related to the installation of servers. They will also examine the roles, features, and versions of server operating systems, along with server management and interfaces. In addition, they will apply the theory and techniques acquired through exercises focused on server installation, virtualization, and tools for diagnosing operating systems. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits
Prerequisites: COMP 1000L, INTE 1100L
Corequisite: None

COMP 2000L Diagnosis and Repair of Computers and Laboratory I
In this course, students will apply the methodology for diagnosing and solving problems in computers, mobile devices, and networks. They will resolve common issues in hardware, storage units, video, mobile devices, printers, and wired and wireless networks. In addition, they will implement preventive measures and documentation processes for the maintenance and proper functioning of computer and network systems. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits
Prerequisite: COMP 1000L
Corequisite: None

COMP 2010L Diagnosis and Repair of Computers and Laboratory II
In this course, students will develop skills in managing, diagnosing, and resolving software program issues. They will analyze common issues with Windows, MacOS, and Linux operating systems. In addition, they will apply solutions to common problems in networks and the security of operating systems. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits
Prerequisite: COMP 2000L
Corequisite: None

COMP 2050L Design and Configuration of Servers and Laboratory
In this course, students will develop designs for configuring Windows Server services. They will also employ appropriate network services and roles for servers. Likewise, they will utilize tools to detect and solve network issues through the servers. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits
Prerequisite: COMP 1050L
Corequisite: None

COMP 2070 CompTIA A+ Certification Exam Review
In this course, students will develop knowledge related to the identification, selection, and configuration of hardware, software, and networks. They will distinguish processes related to the installation and configuration of operating systems, networks, and mobile devices to troubleshoot errors and failures in information systems within business environments. In addition, they will evaluate the best practices in operational procedures related to computer security and compliance with IT professional standards.

3 credits
Prerequisite: INTE 2470L
Corequisite: None

COMP 2080L Fundamentals of Cloud Computing and Laboratory
In this course, students will analyze concepts and principles of cloud computing. They will demonstrate competence in understanding cloud service models and implementing and managing infrastructures in the cloud. They will apply techniques for designing and deploying software in cloud environments. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits
Prerequisites: COMP 1050L, INTE 2440L
Corequisite: None

COMP 3000 CompTIA Network+ Certification Exam Review
In this course, students will analyze the fundamentals of communication networks, their topology, and architecture. They will also evaluate network connectivity by implementing wired and wireless devices in physical and virtual environments. In addition, they will apply network strengthening and security techniques in response to common performance and availability issues. This course will use a simulator with practical exercises to prepare students for the CompTIA Security+ certification exam.

3 credits
Prerequisite: INTE 2770L
Corequisite: None

COMP 3050 CompTIA Security + Certification Exam Review
In this course, students will evaluate various scenarios for detecting threats, attacks, and vulnerabilities in computer systems. In addition, they will apply policies, processes, and procedures for resolving security incidents. They will also explain the relevance of governance systems and security regulations in business environments. This course will use a simulator with practical exercises to prepare students for the CompTIA Security+ certification exam.

3 credits
Prerequisites: CISE 1050, CISE 2000L, CISE 3000L
Corequisite: None

COMP 3070L Server Administration and Laboratory
In this course, students will develop skills in Windows Server administration. They will also implement the installation and configuration of containers in Docker. In addition, they will apply virtualization and redundancy technologies for server management to reduce downtime and achieve business continuity.

3 credits
Prerequisite: COMP 2050L
Corequisite: None

INTE 1040 Information Technology Project Management
In this course, students will develop skills in planning and executing information technology projects. They will also evaluate tools and techniques for effective project monitoring and control in the field of information technology. In addition, they will apply effective communication and leadership techniques in project team management, including conflict resolution techniques and collaboration with internal and external stakeholders.

3 credits
Prerequisite: None
Corequisite: None

INTE 1100L Open-Source Operating Systems and Laboratory
In this course, students will perform the installation, configuration, and management of open-source operating systems using graphical interfaces or command lines. They will manage processes for creating user accounts and groups, as well as planning techniques for resource control. In addition, they will implement security, protection, and optimization measures to ensure the integrity, confidentiality, and efficiency of operating systems. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits
Prerequisite: COMP 1000L
Corequisite: None

INTE 1200L Fundamentals of Operating Systems and Laboratory
In this course, students will analyze the principles, functions, and essential components involved in the installation and administration of an operating system. They will evaluate file formats and device storage capacity. In addition, they will determine the types of updates, monitoring, and security tools necessary for operating system protection. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits
Prerequisite: None
Corequisite: None

INTE 2440L Network Fundamentals and Laboratory
In this course, students will examine the fundamentals of telecommunications networks, along with the essential components of a network. They will analyze the most commonly used reference models in computer networks. They will develop skills for designing,

implementing, and maintaining communication network connectivity. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits
Prerequisite: INTE 1100L
Corequisite: None

INTE 2470L User Support Technician and Laboratory
In this course, students will apply user support processes and the techniques and skills necessary to provide support and assistance to technology users in various environments. Likewise, they will execute techniques and strategies for identifying and resolving common hardware, software, and network issues. In addition, they will develop communication and interpersonal skills when interacting with users, handling difficult situations, and managing expectations regarding their entry into and performance within the technical support services job field. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits
Prerequisite: COMP 2010L
Corequisite: None

INTE 2770L Diagnosis and Maintenance of Networks and Laboratory
In this course, students will analyze diagnostic techniques to identify and resolve connectivity, performance, and security issues in computer networks. They will also apply specialized tools and software for monitoring and analyzing network traffic to optimize device and service performance. Furthermore, they will examine preventive maintenance practices to ensure the availability and stability of network infrastructure.

3 credits
Prerequisites: INTE 2440L
Corequisite: None

MATH 2050 - Applied Mathematics
In this course, students will develop essential mathematical skills for application in the field of information technology. They will solve problems involving exponents, roots, and radicals, and the application of the metric system and unit conversions. In addition, they will demonstrate proficiency in solving equations, handling binary and hexadecimal number systems, as well as mastering Boolean and logical operations.

3 credits
Prerequisite: MATH 1010
Corequisite: None

PROG 1035L Introduction to Computer Programming Logic and Laboratory
In this course, students will discuss the fundamental concepts of logical principles underlying computer system programming. Likewise, they will develop skills for identifying logical patterns, problem-solving through logical reasoning, and constructing algorithms. Students will also demonstrate skills in designing and evaluating logic circuits, as well as knowledge of their operation and applications. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits
Prerequisite: None
Corequisite: None

PROG 2400L Scripting Languages and Laboratory
In this course, students will develop the skills and knowledge needed to efficiently use scripting tools for automating tasks. They will execute scripts to validate and define data structures for proper management. Moreover, they will design logic and scripts to automate configurations, run programs, and manage networks and security controls, creating practical solutions for IT contexts and applying them in real IT industry settings. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits
Prerequisite: PROG 1035L
Corequisite: None

PROG 3360L Python Programming and Laboratory
In this course, students will analyze the fundamental concepts of Python Programming. They will also apply data manipulation and management techniques using lists, dictionaries, variables, data types, and other structures for processing and transforming information. Furthermore, they will design interactive programs, simple web applications, and projects that involve accessing databases and using external Application Programming Interfaces (APIs). This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits
Prerequisite: PROG 1035L
Corequisite: None

INTE 4000L Information Technology Seminar and Laboratory
In this course, students will develop a practical project applicable to their area of specialization by integrating the knowledge and skills acquired in their courses. They will also present creative and innovative alternatives for designing and implementing technological solutions to address real challenges in the field of information technology

through collaboration in interdisciplinary teams. In addition, they will explain proposals for solving information security problems in business environments.

4 credits
Prerequisites: All concentration courses
Corequisite: None

Page 211-215, Proceeds to disclose changes to the Associate Degree in Cyber Security from CCU's School of Technology:

ASSOCIATE DEGREE IN CYBERSECURITY

CIP Code: 43.0403

SOC Code: 15-1212

Credits: 71 credits

Duration: 80 weeks (1 year and 8 months)

Location: Caguas

Modality of Study: On ground and Online

The associate degree in Cybersecurity will prepare students in the technical areas of device management (hardware), programs (software), and networks, with the aim of providing support to users of information systems. Additionally, students will demonstrate mastery of the fundamentals of security, confidentiality, integrity, and availability of information systems. In the cybersecurity courses of this academic program, students will be able to apply offensive and defensive security techniques, as well as analysis techniques, for the development of optimal security systems that comply with the regulations and requirements of information systems. They will also identify the attack threats that a company faces. Furthermore, they will perform risk analysis and vulnerability testing in order to monitor and respond to security incidents. As part of the program, students will have the opportunity to take a review course for the CompTIA Security+ certification. Graduates of this program will be able to work as IT support technicians and information security specialists, among other roles.

PROGRAM COMPETENCIES

1. Apply theoretical and practical knowledge of cybersecurity concepts, such as risk prevention and mitigation, and restoration and improvement of information systems; as well as acquire the necessary skills for diagnosing and repairing personal computers, networks, and their peripheral devices.

2. Employ skills in designing, assembling, and installing personal computers and information technology, as well as skills in configuring and implementing operating systems and networks securely and effectively.

3. Demonstrate verbal and written communication skills in Spanish and English when presenting clear and persuasive proposals for implementing security systems.

4. Analyze problems related to information systems security in a logical and critical manner to propose solutions, such as designing and implementing security systems.

5. Utilize technological and computer means in the design and implementation of security systems and documentation processes, as well as in the development of innovative and creative solutions for mitigating risks related to cyber threats.

6. Develop ethical and moral solutions for computer incidents, considering confidentiality, integrity, and respect for information privacy.

7. Demonstrate skills for collaborating with multidisciplinary and diverse teams, as well as for effectively integrating the variety of perspectives, skills, and knowledge of its members in solving cybersecurity challenges.

Additional program requirement:

1. Orientation with the Academic Coordinator

Graduation Requirements:

1. Have completed 36 credits between those taken at Columbia Central University and those transferred from other institutions or programs.
2. Have achieved a minimum GPA of 2.00 or more.

CURRICULAR STRUCTURE

GENERAL EDUCATION COURSES

Prescribed: 25 credits

COURSE	CODE	COURSE NAME	CONTACT HOURS	CREDITS
BISC	1010	Biological Sciences	45	3
ENGL	1010	Basic English I	45	3
ENGL	1020	Basic English II	45	3
ITTE	1031L	Computer Literacy and Laboratory	60	3
MATH	1010	Basic Mathematics	45	3
SOSC	1010	Social Sciences I	45	3
SPAN	1010	Basic Spanish I	45	3
SPAN	1020	Basic Spanish II	45	3
SEMI	1010	Transition to University Life and Professional Training Seminar	15	1
Sub-Total:			**390 hours**	**25 credits**

CONCENTRATION COURSES

Prescribed: 46 credits

COURSE	CODE	COURSE NAME	CONTACT HOURS	CREDITS
CISE	1000L	Fundamentals of Cybersecurity and Laboratory	60	3
CISE	1050	Information Systems Auditing	45	3
CISE	2000L	Offensive and Defensive Security and Laboratory	60	3
CISE	3000L	Ethical Hacking and Laboratory	75	4
COMP	1000L	Components of Personal Computers and Laboratory	60	3
COMP	1050L	Installation of Servers and Laboratory	60	3
COMP	2080L	Fundamentals of Cloud Computing and Laboratory	60	3
COMP	3050	CompTIA Security+ Certification Exam Review	45	3
INTE	2440L	Network Fundamentals and Laboratory	60	3
INTE	1100L	Open Source Operating Systems and Laboratory	60	3
INTE	1200L	Fundamentals of Operating Systems and Laboratory	60	3
INTE	2470L	User Support Technician and Laboratory	60	3
MATH	2050	Applied Mathematics	45	3
PROG	1035L	Introduction to Computer Programming Logic and Laboratory	60	3
PROG	2400L	Scripting Languages and Laboratory	60	3
Sub-total:			**870 hours**	**46 credits**

The curricular structure of the associate degree in Cybersecurity includes the following components:

COMPONENT	HOURS	CREDITS
General Education Courses	390	25
Concentration Courses	870	46
Total	**1,260**	**71**

ASSOCIATE DEGREE IN CYBERSECURITY

CURRICULUM SEQUENCE**

COURSE	CODE	COURSE NAME	PRE REQUISITES	CREDITS
FIRST TERM: 15 CREDITS				
COMP	1000L	Components of Personal Computers and Laboratory	-----	3
SPAN	1010	Basic Spanish I	-----	3
MATH	1010	Basic Mathematics	-----	3
SOSC	1010	Social Sciences I	-----	3
ITTE	1031L	Computer Literacy and Laboratory	-----	3
SECOND TERM: 13 CREDITS				
SPAN	1020	Basic Spanish II	ENGL 1010	3
INTE	1100L	Open Source Operating Systems and Laboratory	COMP 1000L	3
SEMI	1010	Transition to University Life and Professional Training Seminar	-----	1
CISE	1000L	Fundamentals of Cybersecurity and Laboratory	-----	3
INTE	1200L	Fundamentals of Operating Systems and Laboratory	-----	3
THIRD TERM: 15 CREDITS				
ENGL	1010	Basic English I	-----	3
INTE	2440L	Network Fundamentals and Laboratory	INTE 1100L	3
CISE	1050	Information Systems Auditing	CISE 1000L	3
PROG	1035L	Introduction to Computer Programming Logic and Laboratory	-----	3
BISC	1010	Biological Sciences	-----	3
FOURTH TERM: 15 CREDITS				
ENGL	1020	Basic English II	ENGL 1010	3
COMP	1050L	Installation of Servers and Laboratory	COMP 1000L INTE 1100L	3
MATH	2050	Applied Mathematics	MATH 1010	3
CISE	2000L	Offensive and Defensive Security and Laboratory	CISE 1000L	3
PROG	2400L	Scripting Languages and Laboratory	PROG 1035L	3

FIFTH TERM: 13 CREDITS				
COMP	2080L	Fundamentals of Cloud Computing and Laboratory	COMP 1050L INTE 2440L	3
INTE	2470L	User Support Technician and Laboratory	COMP 1000L	3
COMP	3050	CompTIA Security+ Certification Exam Review	CISE 1050 CISE 2000L	3
CISE	3000L	Ethical Hacking and Laboratory	CISE 1050 CISE 2000L	4

Grand Total of the associate degree in Cybersecurity: 71 credits and 1,260 hours

** The student does not necessarily have to follow the suggested course order, but the order helps them complete their degree in the stipulated time. The student must be aware of taking the courses that have prerequisites in an order that allows them to continue taking the other courses without problems. Courses without prerequisites have no specific order. The student can register for them in the term that they are offered.

MINIMUM GRADING POLICY

Students enrolled in the associate degree in Cybersecurity must obtain at least a grade of C when passing all Concentration courses.

COURSES DESCRIPTIONS

CISE 1000L Fundamentals of Cybersecurity and Laboratory

In this course, students will examine the fundamental principles of cybersecurity and the challenges associated with different types of cyberattacks and their motivations. Students will analyze the operational security processes, policies, standards, and procedures. In addition, they will select controls for risk management to protect systems and networks against cyberattacks. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits (30 hours of theory and 30 lab hours)
Prerequisite: None
Corequisite: None

CISE 1050 Information Systems Auditing

In this course, students will apply the principles, practices, and techniques necessary for conducting audits and monitoring information systems. Likewise, they will identify information systems vulnerabilities to mitigate risks in the IT assets of an industry. Additionally, they will analyze data flow structures and control mechanisms established within information systems based on their industry and regulatory framework.

3 credits (45 hours of theory)
Prerequisite: CISE 1000L
Corequisite: None

CISE 2000L Offensive and Defensive Security and Laboratory

In this course, students will analyze the regulatory framework of cybersecurity using strategies and tools for incident response planning. They will apply both offensive and defensive technological strategies and tools for configuring endpoint security (firewall), intrusion detection systems (IDS), and intrusion prevention systems (IPS) to counter emerging threats. They will design specific strategies to improve cybersecurity posture, address the evolving challenges of the threat landscape, and support the business continuity plan (BCP). This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits (30 hours of theory and 30 lab hours)
Prerequisite: CISE 1000L
Corequisite: None

CISE 3000L Ethical Hacking and Laboratory

In this course, students will apply security analysis and evaluation techniques to identify vulnerabilities and weaknesses in computer systems. They will also analyze methodologies and tools to conduct penetration testing and assess system resilience against cyberattacks. In addition, they will evaluate preventive and corrective measures to strengthen the security of systems and networks. *This course includes the use of a simulator.*

4 credits (45 hours of theory and 30 lab hours)
Prerequisite: CISE 1050, CISE 2000L
Corequisite: None

COMP 1000L Components of Personal Computers and Laboratory

In this course, students will evaluate the types and characteristics of technological devices and components used in computers. They will choose appropriate cables and connectors for networks, devices, and peripherals, as well as the necessary components for assembling and configuring functional computer systems. Additionally, they will recommend options for device maintenance, enhancement, and security. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits (30 hours of theory and 30 lab hours)
Prerequisite: None
Corequisite: None

COMP 1050L Installation of Servers and Laboratory

In this course, students will analyze concepts and processes related to the installation of servers. They will also examine the roles, features, and versions of server operating systems, along with server management and interfaces. In addition, they will apply the theory and techniques acquired through exercises focused on server installation, virtualization, and tools for diagnosing the operating system. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits (30 hours of theory and 30 lab hours)
Prerequisite: COMP 1000L, INTE 1100L
Corequisite: None

COMP 2080L Fundamentals of Cloud Computing and Laboratory

In this course, students will analyze concepts and principles of cloud computing. They will demonstrate competence in understanding cloud service models and implementing and managing infrastructures in the cloud. They will apply techniques for designing and deploying software in cloud environments. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits (30 hours of theory and 30 lab hours)
Prerequisite: COMP 1050L, INTE 2440L
Corequisite: None

COMP 3050 CompTIA Security + Certification Exam Review

In this course, students will evaluate various scenarios for detecting threats, attacks, and vulnerabilities in computer systems. In addition, they will apply policies, processes, and procedures for resolving security incidents. They will also explain the relevance of governance systems and security regulations in business environments. This course will use a simulator with practical exercises to prepare students for the CompTIA Security+ certification exam.

3 credits (45 hours of theory)
Prerequisite: CISE 1050
Corequisite: None

INTE 1100L Open-Source Operating Systems and Laboratory

In this course, students will perform the installation, configuration, and management of open-source operating systems using graphical interfaces or command lines. They will manage processes for creating user accounts and groups, as well as planning techniques for resource control. In addition, they will implement security, protection, and optimization measures to ensure the integrity, confidentiality, and efficiency of operating systems. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits (30 hours of theory and 30 lab hours)
Prerequisite: COMP 1000L
Corequisite: None

INTE 1200L Fundamentals of Operating Systems and Laboratory

In this course, students will analyze the principles, functions, and essential components involved in the installation and administration of an operating system. They will evaluate file formats and device storage capacity. In addition, they will determine the types of updates, monitoring, and security tools necessary for operating system protection. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits (30 hours of theory and 30 lab hours)
Prerequisite: None
Corequisite: None

INTE 2440L Network Fundamentals and Laboratory

In this course, students will examine the fundamentals of telecommunications networks, along with the essential components of a network. They will analyze the most commonly used reference models in computer networks. They will develop skills for designing, implementing, and maintaining communication network connectivity. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits (30 hours of theory and 30 lab hours)
Prerequisite: INTE 1100L
Corequisite: None

INTE 2470L User Support Technician and Laboratory

In this course, students will apply user support processes and the techniques and skills necessary to provide support and assistance to technology users in various environments. Likewise, they will execute techniques and strategies for identifying and resolving common hardware, software, and network issues. In addition, they will develop communication and

interpersonal skills when interacting with users, handling difficult situations, and managing expectations regarding their entry into and performance within the technical support services job field. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits (30 hours of theory and 30 lab hours)
Prerequisite: COMP 2010L
Corequisite: None

MATH 2050 - Applied Mathematics

In this course, students will develop essential mathematical skills for application in the field of information technology. They will solve problems involving exponents, roots, and radicals, and the application of the metric system and unit conversions. In addition, they will demonstrate proficiency in solving equations, handling binary and hexadecimal number systems, as well as mastering Boolean and logical operations.

3 credits (45 hours of theory)
Prerequisite: MATH 1010 (does not apply to certification)
Corequisite: None

PROG 1035L Introduction to Computer Programming Logic and Laboratory

In this course, students will discuss the fundamental concepts of logical principles underlying computer system programming. Likewise, they will develop skills for identifying logical patterns, problem-solving through logical reasoning, and constructing algorithms. Students will also demonstrate skills in designing and evaluating logic circuits, as well as knowledge of their operation and applications. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits (30 hours of theory and 30 lab hours)
Prerequisite: None
Corequisite: None

PROG 2400L Scripting Languages and Laboratory

In this course, students will develop the skills and knowledge needed to efficiently use scripting tools for automating tasks. They will execute scripts to validate and define data structures for proper management. Moreover, they will design logic and scripts to automate configurations, run programs, and manage networks and security controls, creating practical solutions for IT contexts and applying them in real IT industry settings. This course includes practical laboratory exercises for applying the theoretical knowledge acquired.

3 credits (30 hours of theory and 30 lab hours)
Prerequisite: PROG 1035 L
Corequisite: None

BISC 1010 - Biological Sciences

In this course, students will analyze the fundamental concepts and characteristics that distinguish living organisms, their evolutionary processes, and their interaction with other organisms and the environment. Furthermore, they will distinguish the essential aspects for the functioning and development of life. Students will explain the reproductive aspects of the cell and its genetic role. They will also examine different ecosystems and the effect caused by human intervention on the environment.

3 credits (45 hours of theory)
Prerequisite: None
Corequisite: None

ENGL 1010 Basic English I

In this course, students will demonstrate proper use of the English language with a primary focus on syntax, grammar, punctuation, and spelling. They will distinguish verb tenses in sentences and paragraphs. Additionally, students will produce clear, well-developed, and well-organized sentences, messages, paragraphs, and short presentations using correct capitalization, punctuation, and syntax.

3 credits (45 hours of theory)
Prerequisite: None
Corequisite: None

ENGL 1020 Basic English II

In this course, students will formulate sentences with different structures and verb tenses. They will compose various types of paragraphs. In addition, students will develop various types of essays. Likewise, they will evaluate different pieces of literature.

3 credits (45 hours of theory)
Prerequisite: ENGL 1010
Corequisite: None

ITTE 1031L - Computer Literacy and Laboratory

In this course, students will analyze the usefulness of email, institutional databases, and computerized systems in their learning process, considering aspects of academic integrity. In addition, they will examine fundamental concepts related to internet services, security, privacy, and ethics, as well as core aspects of assistive technology. Furthermore, they will demonstrate technological competencies in various application programs, cloud storage, and web pages.

3 credits (30 hours of theory and 30 lab hours)
Prerequisite: None
Corequisite: None

MATH 1010 - Basic Mathematics

In this course, students will apply the characteristics of the set of real numbers and their uses in everyday life, as well as the concepts of ratio, proportion, and percentage. They will also solve everyday situations by applying the concepts of linear equations and inequalities in one variable and polynomials. In addition, students will use measurement concepts and conversion factors in professional and everyday problem solving.

3 credits (45 hours of theory)
Prerequisite: None
Corequisite: None

SEMI 1010 - Transition to University Life and Professional Training Seminar

In this course, students will develop essential skills for their training and transition from university life to their entry into the workforce. They will participate in learning experiences aimed at enhancing self-knowledge and exploring the possibilities of university studies and career paths. In addition, they will explain the competencies sought by employers with the support of available resources. Likewise, they will establish successful strategies for making progress in their academic program and for planning and entering the job market.

1 credit (15 hours of theory)
Prerequisite: None
Corequisite: None

SOSC 1010 - Social Sciences I

In this course, students will examine the fundamental concepts of the social sciences, starting with the evolution and development of society. They will analyze issues related to various disciplines that comprise the social sciences, such as anthropology, sociology, and psychology. They will also evaluate social issues by applying critical judgment to current social problems. *This course requires 10 hours of participation in community service learning activities.*

3 credits (45 hours of theory)
Prerequisite: None
Corequisite: None

SPAN 1010 - Basic Spanish I

In this course, students will examine the basic spelling, grammar, and syntax rules when expressing themselves orally or in writing. Students will analyze a variety of literary genres in a critical and reflexive way. They will also apply the linguistic rules that govern oral and written communication.

3 credits (45 hours of theory)
Prerequisite: None
Corequisite: None

SPAN 1020 - Basic Spanish II

In this course, students will critically analyze different literary genres such as poetry, theater, and novels. They will describe and illustrate their evolution, development, and characteristics. Furthermore, they will analyze the elements that differentiate investigative journalism from in-depth journalism. They will also recognize the importance of public speaking and discourse as resources for effective communication. In addition, they will write and present a speech.

3 credits (45 hours of theory)
Prerequisite: SPAN 1010
Corequisite: None

Page 335-339, Proceeds to disclose changes to the CCU School of Health Sciences Veterinary Assistant Certificate:

TECHNICAL CERTIFICATE IN VETERINARY ASSISTANT

CIP Code: 01.8301

SOC Code: 31-9096

Credits: 38 credits

Duration: 48 weeks (1 year)

Locations: Bayamón, Caguas y Carolina

Modality of Study: On ground

The Veterinary Assistant diploma program will prepare students with the required competencies in the field of clinical veterinary medicine and in public and environmental health activities, as well as in the management of domestic and farm animals. Likewise, students will develop skills in animal care, disease prevention, health management, and veterinary surgical nursing techniques, among others. Graduates of this program will be able to practice their profession as veterinary assistants under the supervision of licensed veterinarians in animal shelters, animal welfare organizations, and public or private clinics.

PROGRAM COMPETENCIES

1. Apply theoretical, practical, and clinical knowledge in their professional performance as veterinary assistants to ensure the safe handling and caring for the health and well-being of animals.

2. Analyze information and procedures related to animal care, anatomy and physiology, health management and disease prevention, vital signs, and clinical documentation, among others, logically and critically.

3. Employ effective oral and written communication skills assertively with the clinical team, as well as service strategies aimed at satisfying customers and pet owners.

4. Utilize relevant technology and computer media, focusing on service, security, and the efficient management of customer information and professional procedures.

5. Demonstrate a sense of responsibility, respect for diversity, and compliance with the laws, regulations, and ethical codes established for the protection, well-being, and management of animals in the practice of their profession.

PRACTICE REQUIREMENTS

To take the practice component of the program, the following current and original documents are required:

1. Negative Criminal Record Certificate
2. Health Certificate
3. 2x2 photo
4. Resume

**Important Note: Some practice centers may require additional documents. The student does not need to revalidate to practice the profession.

CURRICULAR STRUCTURE

Prescribed: 38 credits

COURSE	CODE	COURSE NAME	CONTACT HOURS	CREDITS
VETR	1000	Introduction To Veterinary Medicine and Animal Biosafety	60	2
ESPA	1007	Basic Spanish	60	2
INGL	1109	Basic English I	60	2
MATE	1222	Basic Mathematics	60	2
VETR	1010L	General Principles of The Veterinary Operating Room and Laboratory	60	2
VETR	1020L	Anatomy And Physiology of Animals and Laboratory	90	3
VETR	1100	Veterinary Microbiology	60	2
VETR	1110	Veterinary Pathology, Toxicology, And Pharmacology	60	2
VETR	1120L	Principles Of Veterinary Nursing and Laboratory	90	3
VETR	1130L	Management, Care, And Disease of Farm Animals and Laboratory	90	3
VETR	1140L	Clinical Veterinary Procedures Laboratory	90	3
VETR	1200	Principles Of Veterinary Dentistry	30	1
VETR	1210	Animal Nutrition	30	1
VETR	1220L	Introduction To Veterinary Radiology and Sonography and Laboratory	90	3
PSYC	1110	Principles Of Community Social Psychology	30	1
VETR	1300P	Veterinary Clinical Practice	240	6
Total:			**1,200 hours**	**38 credits**

VETERINARY ASSISTANT
CURRICULUM: JUNE 2024

CURRICULUM SEQUENCE**

COURSE	CODE	COURSE NAME	PRE-REQUISITES	CREDITS
FIRST TERM: 13 CREDITS				
VETR	1000	Introduction To Veterinary Medicine and Animal Biosafety	----	2
ESPA	1007	Basic Spanish	----	2
INGL	1109	Basic English I	----	2
MATE	1222	Basic Mathematics	----	2
VETR	1010L	General Principles of The Veterinary Operating Room and Laboratory	----	2
VETR	1020L	Anatomy And Physiology of Animals and Laboratory	-----	3
SECOND TERM: 13 CREDITS				
VETR	1100	Veterinary Microbiology	VETR 1000	2
VETR	1110	Veterinary Pathology, Toxicology, And Pharmacology	MATE 1222 VETR 1020L	2
VETR	1120L	Principles Of Veterinary Nursing and Laboratory	VETR 1020L	3
VETR	1130L	Management, Care, And Disease of Farm Animals and Laboratory	VETR 1000 VETR1020L	3
VETR	1140L	Clinical Veterinary Procedures Laboratory	VETR 1000 VETR 1010L VETR1020L	3
TERCER TÉRMINO: 12 CRÉDITOS				
VETR	1200	Principles Of Veterinary Dentistry	VETR 1000 VETR 1010L VETR 1020L	1
VETR	1210	Animal Nutrition	VETR 1000 VETR 1020L	1
VETR	1220L	Introduction To Veterinary Radiology and Sonography and Laboratory	VETR 1000 VETR 1010L VETR 1020L	3
PSYC	1110	Principles Of Community Social Psychology	ESPA 1007	1
VETR	1300P	Veterinary Clinical Practice	VETR 1100 VETR 1120L VETR 1130L VETR 1140L VETR 1200 VETR 1210 VETR 1220L	6

Grand total of Diploma in Veterinary Assistant: 1,200 hours and 38 credits

** The student does not necessarily have to follow the suggested course order, but the order helps them complete their degree in the stipulated time. The student must be aware of taking the courses that have prerequisites in an order that allows them to continue taking the other courses without problems. Courses without prerequisites have no specific order. The student can register for them in the term that they are offered.

MINIMUM GRADING POLICY

Students enrolled in Veterinary Assistant must obtain at least a grade of C (70% or higher) to pass all courses in the program.

The following courses must be passed with a grade of C or higher:

VETR 1000	ESPA 1007	INGL 1109	MATE 1222	VETR 1010L	VETR 1020L
VETR 1100	VETR 1110	VETR 1120L	VETR 1130L	VETR 1140L	VETR 1200
VETR 1210	VETR 1220L	PSCY 1110			

The following course must be passed with a grade of B or higher:

VETR 1300P

COURSES DESCRIPTIONS

VETR 1000 Introduction to Veterinary Medicine and Animal Biosafety

In this course, students will assess the ethical and professional responsibilities of a veterinary assistant in accordance with safety, health promotion, and legal regulations of the practice. They will apply technical skills in biosecurity, such as sterilizing areas and equipment, controlling infection transmission, and other biological and occupational risk factors. Furthermore, they will provide guidance on pet management and the responsibilities of pet owners regarding their care.

2 credits
Prerequisite: None
Corequisite: None

ESPA 1007 Basic Spanish

In this course, students will produce oral presentations and written assignments using the grammatical rules of the Spanish language. They will also analyze texts of varying levels of complexity. Likewise, students will write assignments with varied vocabulary, correct syntax, and adequate spelling.

2 credits
Prerequisite: None

INGL 1109 Basic English I

In this course, students will demonstrate command of the basic rules of English grammar and their usage both orally (listening and speaking) and in writing (reading and writing). They will compose sentences by using the standard conventions of the English language. In addition, students will reinforce their vocabulary knowledge for a better understanding of English in everyday situations.

2 credits
Prerequisite: None

MATE 1222 Basic Mathematics

In this course, students will apply basic mathematics knowledge in practical exercises and everyday situations. They will solve basic mathematical operations, such as addition, subtraction, multiplication, and division of numerals, integers, decimals, and fractions. In addition, they will employ concepts of percentages, ratios, proportions, and units of weight and measurement.

2 credits
Prerequisite: None

VETR 1010L General Principles of the Veterinary Operating Room and Laboratory

In this course, students will analyze the procedures of veterinary surgical interventions and the principles of aseptic techniques. They will apply skills in preparing personnel, equipment, accessories, and procedures for surgical interventions. Likewise, they will prepare the surgical area, considering the specific procedure required for each patient.

2 credits
Prerequisite: None
Corequisite: None

VETR 1020L Anatomy and Physiology of Animals and Laboratory

In this course, students will examine the history and origins of the study of veterinary anatomy and physiology. They will analyze the functions of the integumentary, skeletal, and muscular systems of various domestic animals. Moreover, they will differentiate the primary functions of the systems that compose the animal body.

3 credits
Prerequisite: None
Corequisite: None

VETR 1100 Veterinary Microbiology

In this course, students will examine the principles of veterinary microbiology. They will also explain the morphology, physiology, genetics, and metabolism of various types of microorganisms. Furthermore, they will discuss the importance of studying microorganisms in the fields of veterinary medicine and the food industry.

2 credits
Prerequisite: VETR 1000
Corequisite: None

VETR 1110 Veterinary Pathology, Toxicology, and Pharmacology

In this course, students will analyze the anatomical, physiological, and chemical alterations that occur in the animal organism as a result of a disease. They will relate the clinical symptoms presented in animals to the main forms of diagnosis and the corresponding therapeutic processes. They will apply knowledge of techniques for administering and dosing veterinary medications and treatments. They will evaluate the effects of drugs on animals, the modifications of pathological processes, and the alterations they cause.

2 credits
Prerequisite: MATE 1222, VETR 1020L
Corequisite: None

VETR 1120L Principles of Veterinary Nursing and Laboratory

In this course, students will examine the basic elements of veterinary nursing. They will also develop skills for disease prevention in animals and for managing and caring for their health. Additionally, they will discuss therapeutic techniques for animals during recovery and ways to support pet owners dealing with the loss of a pet.

3 credits
Prerequisite: VETR 1020L
Corequisite: None

VETR 1130L Management, Care, and Diseases of Farm Animals and Laboratory

In this course, students will determine the importance of livestock and safety in the livestock industry. They will also examine the characteristics of farm animals. Furthermore, they will apply their knowledge in the care and management of these animals.

3 credits
Prerequisite: VETR 1000, VETR 1020L
Corequisite: None

VETR 1140L Clinical Veterinary Procedures and Laboratory

In this course, students will examine the clinical procedures applicable to the practice of veterinary medicine. They will also differentiate the most commonly used tests for hematology, immunology, urinalysis, blood chemistry, microbiology, parasitology, and cytology, among others. Additionally, they will perform sample collection and handling under the supervision of a veterinarian.

3 credits
Prerequisite: VETR 1000, VETR 1010L, VETR 1020L
Corequisite: None

VETR 1200 Principles of Veterinary Dentistry

In this course, students will identify the oral and dental anatomy of domestic animals with special emphasis on the dog, cat, and horse. They will classify the most used instruments and materials in dental practice. They will discuss the most common lesions of the oral cavity, their etiology, symptoms, and treatment options.

1 credit
Prerequisite: *VETR 1000, VETR 1010L, VETR 1020L*

VETR 1210 Animal Nutrition

In this course, students will explain the fundamental elements of animal nutrition. They will classify foods based on their composition, caloric content, and nutritional value. In addition, they will examine methods for estimating food intake, the digestibility of foods, and the factors that influence it.

1 credit
Prerequisite: VETR 1000, VETR 1020L
Corequisite: None

VETR 1220L Introduction to Veterinary Radiology and Sonography and Laboratory

In this course, students will analyze the principles of the most suitable radiological and ultrasound techniques for diagnostic approaches. They will recognize the different imaging modes and the most common artifacts in veterinary sonography for diagnosing abdominal pathologies. Furthermore, they will perform the necessary sonographic techniques to obtain high-quality diagnostic images.

3 credits
Prerequisite: VETR 1000, VETR 1010L, VETR 1020L
Corequisite: None

PSCY1110 Principles of Community Social Psychology

In this course, students will examine the impact of psychosocial phenomena on human behavior as social beings and the application of this knowledge in the veterinary practice field. They will determine the emotional and psychological dynamics that influence the professional-pet-caregiver interaction. Additionally, they will analyze contemporary topics in psychology and veterinary sciences.

1 credit
Prerequisite: ESPA 1007

VETR 1300P Veterinary Clinical Practice

In this course, students will employ the necessary biosafety protocols in animal health care. They will practice techniques for restraint, handling, emergency response, and first aid in clinical procedures. Students will demonstrate professional, ethical, and respectful behavior with particular attention to confidentiality.

6 credits
Prerequisite: *All VETR courses*

Page 340-346, Proceeds to disclose changes to the CCU School of Health Sciences Veterinary Assistant with Pet Grooming Certificate:

TECHNICAL CERTIFICATE IN VETERINARY ASSISTANT WITH PET GROOMING

CIP Code: 01.8301

SOC Code: 29-2056, 31-9096

Credits: 52 credits

Duration: 64 weeks (1 year and 4 months)

Location: Yauco

Modality of Study: On ground

The Veterinary Assistant with Pet Grooming diploma program will prepare students with the required competencies in the field of clinical veterinary medicine and in public and environmental health activities, as well as in animal hygiene, grooming, and conditioning (pet grooming). Furthermore, students will develop basic skills in veterinary surgical nursing, radiology, sonography, and dental and laboratory procedures. Graduates of this program will be able to practice their profession as veterinary assistants under the supervision of licensed veterinarians in animal shelters, animal welfare organizations, canine or feline grooming centers, or through self-employment, among others.

PROGRAM COMPETENCIES

1. Apply theoretical, practical, and clinical knowledge aimed at preserving life, caring for injuries, and controlling diseases in domestic and farm animals under the supervision of a veterinarian.

2. Demonstrate theoretical knowledge and professional skills in the care and grooming of pets in their role as professional pet groomers.

3. Employ effective assertive communication skills, both oral and written, with the clinical team, as well as service strategies aimed at satisfying customers and pet owners.

4. Analyze information and procedures related to animal care and physiology, health management and disease prevention, vital signs, and clinical documentation, among others, logically and critically.

5. Utilize relevant technology and computer media, focusing on service, security, and the efficient management of customer information and professional procedures.

6. Demonstrate a sense of responsibility, respect for diversity, and compliance with the laws, regulations, and ethical codes established for the protection, well-being, and management of animals in the practice of their profession.

PRACTICE REQUIREMENTS

To take the practice component of the program, the following current and original documents are required:

1. Negative Criminal Record Certificate
2. Health Certificate
3. 2x2 photo
4. Resume

**Important Note: Some practice centers may require additional documents. The student does not need to revalidate to practice the profession.

CURRICULAR STRUCTURE

Prescribed: 52 credits

COURSE	CODE	COURSE NAME	CONTACT HOURS	CREDITS
VETR	1000	Introduction To Veterinary Medicine and Animal Biosafety	60	2
ESPA	1007	Basic Spanish	60	2
MATE	1222	Basic Mathematics	60	2
VETR	1010L	General Principles of The Veterinary Operating Room and Laboratory	60	2
VETR	1020L	Anatomy And Physiology of Animals and Laboratory	90	3
GROM	1000	Introduction to Pet Grooming	60	2
VETR	1100	Veterinary Microbiology	60	2
VETR	1110	Veterinary Pathology, Toxicology, And Pharmacology	60	2
VETR	1120L	Principles Of Veterinary Nursing and Laboratory	90	3
VETR	1200	Principles Of Veterinary Dentistry	30	1
VETR	1130L	Management, Care, And Disease of Farm Animals and Laboratory	90	3
VETR	1140L	Clinical Veterinary Procedures Laboratory	90	3
VETR	1210	Animal Nutrition	30	1
VETR	1220L	Introduction To Veterinary Radiology and Sonography and Laboratory	90	3
GROM	1030L	Pre-Grooming Techniques and Laboratory	90	3
VETR	1301P	Veterinary Clinical Practice	135	3
GROM	1100L	Basic Grooming and Laboratory	90	3
GROM	1120L	Grooming Cuts and Styles I and Laboratory	90	3
GROM	1200L	Advanced Grooming Techniques	90	3
GROM	1301P	Grooming Practice	135	3
INGL	1109	Basic English I	60	2
PSYC	1110	Principles Of Community Social Psychology	30	1
Total:			**1,650 hours**	**52 credits**

VETERINARY ASSISTANT WITH PET GROOMING
CURRICULUM: JUNE 2024

CURRICULUM SEQUENCE**

COURSE	CODE	COURSE NAME	PRE-REQUISITES	CREDITS
FIRST TERM: 13 CREDITS				
VETR	1000	Introduction To Veterinary Medicine and Animal Biosafety	----	2
ESPA	1007	Basic Spanish	----	2
MATE	1222	Basic Mathematics	----	2
VETR	1010L	General Principles of The Veterinary Operating Room and Laboratory	----	2
VETR	1020L	Anatomy And Physiology of Animals and Laboratory	-----	3
GROM	1000	Introduction to Pet Grooming	----	2
SECOND TERM: 14 CREDITS				
VETR	1100	Veterinary Microbiology	VETR 1000	2
VETR	1110	Veterinary Pathology, Toxicology, And Pharmacology	MATE 1222 VETR 1020L	2
VETR	1120L	Principles Of Veterinary Nursing and Laboratory	VETR 1020L	3
VETR	1200	Principles Of Veterinary Dentistry	VETR 1000 VETR 1010L VETR 1020L	1
VETR	1130L	Management, Care, And Disease of Farm Animals and Laboratory	VETR 1000 VETR1020L	3
VETR	1140L	Clinical Veterinary Procedures Laboratory	VETR 1000 VETR 1010L VETR1020L	3
THIRD TERM: 13 CREDITS				
VETR	1210	Animal Nutrition	VETR 1000 VETR 1020L	1
VETR	1220L	Introduction To Veterinary Radiology and Sonography and Laboratory	VETR 1000 VETR 1010L VETR 1020L	3
GROM	1030L	Pre-Grooming Techniques and Laboratory	----	3
VETR	1301P	Veterinary Clinical Practice	VETR 1000 VETR 1010L VETR 1020L VETR 1100 VETR 1120L VETR 1130L VETR 1140L VETR 1200 VETR 1210 VETR 1220L	3
GROM	1100L	Basic Grooming Techniques	----	3

FOURTH TERM: 12 CREDITS				
GROM	1120L	Grooming Cuts and Styles I and Laboratory	GROM 1000 GROM 1030L GROM 1100L	3
GROM	1200L	Advances Grooming Techniques	GROM 1000 GROM 1030L GROM 1100L	3
GROM	1301P	Grooming Practice	GROM 1000 GROM 1030L GROM 1120L GROM 1200L	3
INGL	1109	Basic English I	----	2
PSYC	1110	Principles Of Community Social Psychology	ESPA 1007	1

Grand total of Diploma in Veterinary Assistant with Pet Grooming: 1,650 hours and 52 credits

** The student does not necessarily have to follow the suggested course order, but the order helps them complete their degree in the stipulated time. The student must be aware of taking the courses that have prerequisites in an order that allows them to continue taking the other courses without problems. Courses without prerequisites have no specific order. The student can register for them in the term that they are offered.

MINIMUM GRADING POLICY

Students enrolled in Veterinary Assistant with Pet Grooming must obtain at least a grade of C (70% or higher) to pass all courses in the program.

The following courses must be passed with a grade of C or higher:

VETR 1000 ESPA 1007 INGL 1109 MATE 1222 VETR 1010L VETR 1020L
VETR 1100 VETR 1110 VETR 1120L VETR 1130L VETR 1140L VETR 1200
VETR 1210 VETR 1220L PSCY 1110 GROM 1000 GROM 1030L GROM1100L
GROM 1120L GROM 1200L

The following course must be passed with a grade of B or higher:

GROM 1301P VETR 1301P

COURSES DESCCRIPTIONS

ESPA 1007 – Basic Spanish

In this course, students will produce oral presentations and written assignments using the grammatical rules of the Spanish language. They will also analyze texts of varying levels of complexity. Likewise, students will write assignments with varied vocabulary, correct syntax, and adequate spelling.

2 credits
Prerequisite: None
Corequisite: None

INGL 1109 – Basic English I

In this course, students will demonstrate command of the basic rules of English grammar and their usage both orally (listening and speaking) and in writing (reading and writing). They will compose sentences by using the standard conventions of the English language. In addition, students will reinforce their vocabulary knowledge for a better understanding of English in everyday situations.

2 credits
Prerequisite: None
Corequisite: None

MATE 1222 – Basic Mathematics

In this course, students will apply basic math knowledge through practical exercises and in everyday life situations. They will solve basic mathematical operations, such as addition, subtraction, multiplication, and division of numerals, integers, decimals, and fractions. In addition, they will use concepts of percentages, ratios, proportions, and units of weight and measurement.

2 credits
Prerequisite: None
Corequisite: None

PSYC 1110 – Principles of Community Social Psychology

In this course, students will examine the impact of psychosocial phenomena on human behavior as social beings and the application of this knowledge in the veterinary practice field. They will determine the emotional and psychological dynamics that influence the professional-pet-caregiver interaction. Additionally, they will analyze contemporary topics in psychology and veterinary sciences.

1 credit
Prerequisite: ESPA 1007

VETR 1000 – Introduction to Veterinary Medicine and Animal Biosafety

In this course, students will assess the ethical and professional responsibilities of a veterinary assistant in accordance with safety, health promotion, and legal regulations of the practice. They will apply technical skills in biosecurity, such as sterilizing areas and equipment, controlling infection transmission, and other biological and occupational risk factors. Furthermore, they will provide guidance on pet management and the responsibilities of pet owners regarding their care.

2 credits
Prerequisite: None
Corequisite: None

VETR 1010L – General Principles of the Veterinary Operating Room and Laboratory

In this course, students will analyze the procedures of veterinary surgical interventions and the principles of aseptic techniques. They will apply skills in preparing personnel, equipment, accessories, and procedures for surgical interventions. Likewise, they will prepare the surgical area, considering the specific procedure required for each patient.

2 credits
Prerequisite: None
Corequisite: None

VETR 1020L – Anatomy and Physiology of Animals and Laboratory

In this course, students will examine the history and origins of the study of veterinary anatomy and physiology. They will analyze the functions of the integumentary, skeletal, and muscular systems of various domestic animals. Moreover, they will differentiate the primary functions of the systems that compose the animal body.

3 credits
Prerequisite: None
Corequisite: None

VETR 1100 – Veterinary Microbiology

In this course, students will examine the principles of veterinary microbiology. They will also explain the morphology, physiology, genetics, and metabolism of various types of microorganisms. Furthermore, they will discuss the importance of studying microorganisms in the fields of veterinary medicine and the food industry.

2 credits
Prerequisite: VETR 1000
Corequisite: None

VETR 1110 – Veterinary Pathology, Toxicology, and Pharmacology

In this course, students will analyze the anatomical, physiological, and chemical alterations that occur in the animal organism as a result of a disease. They will relate the clinical symptoms presented in animals to the main forms of diagnosis and the corresponding therapeutic processes. They will apply knowledge of techniques for administering and dosing veterinary medications and treatments. They will evaluate the effects of drugs on animals, the modifications of pathological processes, and the alterations they cause.

2 credits
Prerequisite: MATE 1222, VETR 1020L
Corequisite: None

VETR 1200 – Principles of Veterinary Dentistry

In this course, students will examine the oral and dental anatomy of domestic animals, with a special emphasis on dogs and cats. They will distinguish the instruments, materials, and procedures most commonly used in veterinary dentistry practice. In addition, they will discuss the most common oral cavity conditions, their etiologies, symptoms, and treatment options, as well as preventive oral health measures.

1 credit
Prerequisite: VERT 1000, VERT 1010L, VERT 1020L
Corequisite: None

VETR 1120L – Principles of Veterinary Nursing and Laboratory

In this course, students will examine the basic elements of veterinary nursing. They will also develop skills for disease prevention in animals and for managing and caring for their health. Additionally, they will discuss therapeutic techniques for animals during recovery and ways to support pet owners dealing with the loss of a pet.
3 credits
Prerequisite: VETR 1020L
Corequisite: None

VETR 1210 - Animal Nutrition

In this course, students will explain the fundamental elements of animal nutrition. They will classify foods based on their composition, caloric content, and nutritional value. In addition, they will examine methods for estimating food intake, the digestibility of foods, and the factors that influence it.

1 credit
Prerequisite: VETR 1000, VETR
1020L Corequisite: None

VETR 1130L – Management, Care, and Diseases of Farm Animals and Laboratory

In this course, students will determine the importance of livestock and safety in the livestock industry. They will also examine the characteristics of farm animals. Furthermore, they will apply their knowledge in the care and management of these animals.

3 credits
Prerequisite: VETR 1000, VETR 1020L
Corequisite: None

VETR 1140L – Clinical Veterinary Procedures and Laboratory

In this course, students will examine the clinical procedures applicable to the practice of veterinary medicine. They will also differentiate the most commonly used tests for hematology, immunology, urinalysis, blood chemistry, microbiology, parasitology, and cytology, among others. Additionally, they will perform sample collection and handling under the supervision of a veterinarian.

3 credits
Prerequisite: VETR 1000, VETR 1010L, VETR 1020L
Corequisite: None

VETR 1220L – Introduction to Veterinary Radiology and Sonography and Laboratory

In this course, students will analyze the principles of the most suitable radiological and ultrasound techniques for diagnostic approaches. They will recognize the different imaging modes and the most common artifacts in veterinary sonography for diagnosing abdominal pathologies. Furthermore, they will perform the necessary sonographic techniques to obtain high-quality diagnostic images.

3 credits
Prerequisite: VETR 1000, VETR 1010L, VETR 1020L
Corequisite: None

VETR 1301P – Veterinary Clinical Practice

In this course, students will implement the necessary procedures and protocols related to animal health in a veterinary clinic. They will use appropriate techniques in routine surgical and clinical procedures in veterinary practice. Furthermore, they will demonstrate professional and ethical conduct in both their communication and the performance of their duties in veterinary practice.

3 credits
Prerequisite: All courses, except for PSYC 1110
Corequisite: None

GROM 1000 – Introduction to Pet Grooming

In this course, students will explain the responsibilities and essential tasks of the professional pet groomer role. They will also examine the regulatory laws of the profession, methods of compensation, and proper valuation of these services in the pet grooming industry. Furthermore, they will develop knowledge of the methods for grooming, preventing accidents and illnesses in pets, and maintaining the establishment.

2 credits
Prerequisite: None
Corequisite: None

GROM 1030L – Pre-Grooming Techniques and Laboratory

In this course, students will apply the necessary knowledge for the process of preparing pets for basic or full grooming. They will explain the importance of regular pet grooming and its effects on the pet's coat, skin, and overall health. They will also differentiate the tools, treatments, and grooming equipment most commonly used for pet hygiene care.

3 credits
Prerequisite: None
Corequisite: None

GROM 1100L – Basic Grooming and Laboratory

In this course, students will apply skills for the proper maintenance of pet grooming tools and equipment. They will determine product and tool selection techniques according to the pet's coat. They will organize the work area for the comfort and safety of pets and employees in the facility.

3 credits
Prerequisite: None
Corequisite: None

GROM 1120L – Grooming Cuts and Styles I and Laboratory

In this course, students will analyze existing styles in dog and cat grooming. They will associate the anatomy of the most common breeds with the pet's cutting patterns. They will apply master techniques of pattern and cutting styles.

3 credits

Prerequisite: GROM 1000, GROM 1030L, GROM 1100L
Corequisite: None

GROM 1200L – Advanced Grooming Techniques and Laboratory

In this course, students will apply grooming standards and commercial and competition patterns according to the breed. They will use appropriate bathing, drying, and clipping techniques based on the pet's coat and health condition. They will master techniques such as hand stripping, fluff out, and de-shedding according to the pet's coat.

3 credits
Prerequisite: GROM 1000, GROM 1030L, GROM 1100L
Corequisite: None

GROM 1301P – Grooming Practice

In this course, students will practice grooming techniques and skills in veterinary clinics, pet grooming salons, and farm supply stores, among others. They will use the proper tools, equipment, and treatments for effective grooming. They will demonstrate knowledge in general grooming, animal styling, accident prevention, and customer service.

3 credits
Prerequisite: All GROM courses
Corequisite: None

Page 352-356, Proceeds to disclose changes to the CCU School of Health Sciences Professional Pet Groomer Certificate:

TECHNICAL CERTIFICATE PROFESSIONAL PET GROOMER

CIP Code: 01.0504

SOC Code: 39-2021

Credits: 37 credits

Duration: 48 weeks (1 year)

Location: Bayamón, Caguas, and Carolina

Modality of Study: On ground

The Professional Pet Groomer diploma program will prepare students with the required professional competencies in the field of animal hygiene, grooming, and conditioning (pet grooming). Furthermore, students will apply effective skills for animal care, such as creative grooming techniques and the identification of the most common skin conditions in pets. They will develop basic knowledge and methods for business administration and self-employment in animal grooming services. Graduates of this program will be able to work in veterinary centers, canine or feline grooming centers, and their own businesses, among others.

PROGRAM COMPETENCIES

1. Demonstrate theoretical knowledge and professional skills in the care and grooming of pets in their role as professional pet groomers.
2. Perform basic business management and operation activities as support staff in their place of employment or as business owners.
3. Apply logical and critical thinking when performing established processes and the service techniques and teamwork skills required in their role as professional pet groomers.
4. Employ effective oral and written communication skills, as well as service strategies aimed at satisfying customers and pet owners.
5. Utilize relevant technology and computer media with a focus on service, security, and efficient management of customer information and profession-related procedures.
6. Demonstrate a sense of responsibility, respect for diversity, and compliance with the established laws, regulations, and ethical codes for the protection, well-being, and management of animals in the practice of their profession.

PRACTICE REQUIREMENTS

To take the practice component of the program, the following current and original documents are required:

1. Negative Criminal Record Certificate
2. Health Certificate
3. 2x2 photo
4. Resume

**Important Note: Some practice centers may require additional documents. The student does not need to revalidate to practice the profession.

CURRICULAR STRUCTURE

Prescribed: 37 credits

COURSE	CODE	COURSE NAME	CONTACT HOURS	CREDITS
GROM	1000	Introduction to Pet Grooming	60	2
GROM	1010	Anatomy and Animal Husbandry	60	2
GROM	1020	Health, Wellness, and Emergency Management	60	2
GROM	1030L	Pre-Grooming Techniques and Laboratory	90	3
GROM	1040L	Principles of Behavior and Laboratory	90	3
GROM	1100L	Basic Grooming and Laboratory	90	3
GROM	1110	Basic Business and Marketing	60	2
CONT	1095	Elementary Accounting I	60	2
GROM	1120L	Grooming Cuts and Styles I and Laboratory	90	3
GROM	1130L	Creative Grooming and Asian Fusions and Laboratory	90	3
GROM	1200L	Advanced Grooming Techniques and Laboratory	90	3
GROM	1210L	Grooming Cuts and Styles II and Laboratory	90	3
GROM	1220L	Grooming Seminar and Laboratory	60	2
GROM	1300P	Grooming Practice	180	4
Total:			**1,170 hours**	**37 credits**

PROFESSIONAL PET GROOMER
CURRICULUM: JUNE 2024

CURRICULUM SEQUENCE**

COURSE	CODE	COURSE NAME	PRE-REQUISITES	CREDITS
FIRST TERM: 12 CREDITS				
GROM	1000	Introduction to Pet Grooming	----	2
GROM	1010	Anatomy and Animal Husbandry	----	2
GROM	1020	Health, Wellness, and Emergency Management	----	2
GROM	1030L	Pre-Grooming Techniques and Laboratory	----	3
GROM	1040L	Principles of Behavior and Laboratory	----	3
SECOND TERM: 13 CREDITS				
GROM	1100L	Basic Grooming and Laboratory	----	3
GROM	1110	Basic Business and Marketing	----	2
CONT	1095	Elementary Accounting I	----	2
GROM	1120L	Grooming Cuts and Styles I and Laboratory	GROM 1000 GROM 1030L GROM 1100L	3
GROM	1130L	Creative Grooming and Asian Fusions and Laboratory	GROM 1000 GROM 1030L GROM 1100L	3
THIRD TERM: 12 CREDITS				
GROM	1200L	Advanced Grooming Techniques and Laboratory	GROM 1000 GROM 1030L GROM 1100L	3
GROM	1210L	Grooming Cuts and Styles II and Laboratory	GROM 1120L	3
GROM	1220L	Grooming Seminar and Laboratory	GROM 1120L	2
GROM	1300P	Grooming Practice	GROM 1120L GROM 1130L GROM 1200L	4

Grand total of Diploma in Professional Pet Groomer: 1,170 hours and 37 credits

** The student does not necessarily have to follow the suggested course order, but the order helps them complete their degree in the stipulated time. The student must be aware of taking the courses that have prerequisites in an order that allows them to continue taking the other courses without problems. Courses without prerequisites have no specific order. The student can register for them in the term that they are offered.

MINIMUM GRADING POLICY

Students enrolled in Professional Pet Groomer must obtain at least a grade of C (70% or higher) to pass all courses in the program.

The following courses must be passed with a grade of C or higher:

GROM 1000 GROM 1010 GROM 1020 GROM 1030L GROM 1040L GROM1100L
GROM 1100L GROM 1110 CONT 1095 GROM 1120L GROM 1130L GROM 1200L
GROM 1210L GROM 1220L

The following course must be passed with a grade of B or higher:

GROM 1300P

COURSES DESCRIPTIONS

GROM 1000 Introduction to Pet Grooming
In this course, students will explain the responsibilities and essential tasks of the professional pet groomer role. They will also examine the regulatory laws of the profession, methods of compensation, and proper valuation of these services in the pet grooming industry. Furthermore, they will develop knowledge of the methods for grooming, preventing accidents and illnesses in pets, and maintaining the establishment.

2 credits
Prerequisite: None
Corequisite: None

GROM 1010 Anatomy and Animal Husbandry
In this course, students will examine the basic concepts of the anatomy and animal husbandry of domestic animals (dogs and cats). They will describe the skeletal system, the integumentary system and its accessory organs (nails), sensory organs (eyes and ears), anal glands, and the most common pathologies associated with these. They will explain the different breeds, their history, animal husbandry, and the anatomy of domestic animals for the correct application of grooming and cutting patterns.

2 credits
Prerequisite: None
Corequisite: None

GROM 1020 Health, Wellness, and Emergency Management
In this course, students will analyze the factors related to pet health, well-being, and emergencies. They will compare the ways in which a preventive approach helps preserve the health and well-being of a pet. They will demonstrate knowledge of emergency management plans and safety protocols for accident prevention.

2 credits
Prerequisite: None
Corequisite: None

GROM 1030L Pre-Grooming Techniques and Laboratory
In this course, students will apply the necessary knowledge for the process of preparing pets for basic or full grooming. They will explain the importance of regular pet grooming and its effects on the pet's coat, skin, and overall health. They will also differentiate the tools, treatments, and grooming equipment most commonly used for pet hygiene care.

3 credits
Prerequisite: None
Corequisite: None

GROM 1040L Principles of Behavior and Laboratory
In this course, students will examine canine training terminology and methods. They will analyze theories of canine psychology useful for evaluating pets with behavioral problems. Students will apply animal handling and restraint skills in the work area. Furthermore, they will promote training techniques for dogs from early life stages to modify behavior and reduce aggression levels.

3 credits
Prerequisite: None
Corequisite: None

GROM 1100L Basic Grooming and Laboratory
In this course, students will apply skills for the proper maintenance of pet grooming tools and equipment. They will determine product and tool selection techniques according to the pet's coat. They will organize the work area for the comfort and safety of pets and employees in the facility.

3 credits
Prerequisite: None
Corequisite: None

GROM 1110 Basic Business and Marketing
In this course, students will discuss the processes, procedures, and requirements necessary for establishing and running a business, as well as basic concepts of administration and customer service in Puerto Rico. They will evaluate tools and mechanisms related to the interests and needs of new clients. Likewise, they will apply marketing strategies, focusing on business positioning against competitors and challenges faced by entrepreneurs for business success.

2 credits
Prerequisite: None
Corequisite: None

CONT 1095 Elementary Accounting I

In this course, students will analyze the basic concepts of the accounting cycle for a service business and its impact on a company's operations. They will develop the topics of accounting equation, T accounts, transaction analysis, financial statements, and payroll. They will create the financial reports required to complete a company's accounting cycle.

2 credits
Prerequisite: None
Corequisite: None

GROM 1120L - Grooming Cuts and Styles I and Laboratory
In this course, students will analyze existing styles in dog and cat grooming. They will associate the anatomy of the most common breeds with the pet's cutting patterns. They will apply master techniques of pattern and cutting styles.

3 credits
Prerequisite: GROM 1000, GROM 1030L, GROM 1100L
Corequisite: None

GROM 1130L Creative Grooming and Asian Fusions and Laboratory
In this course, students will examine proper techniques for specialized cuts in creative dog grooming. They will value artistic expression in creating innovative designs for different dog breeds. In addition, they will perform specialized cuts for the hygiene, health, and beauty care of pets.

3 credits
Prerequisite: GROM 1000, GROM 1030L, GROM 1100L
Corequisite: None

GROM 1200L - Advanced Grooming Techniques and Laboratory
In this course, students will apply grooming standards and commercial and competition patterns according to the breed. They will use appropriate bathing, drying, and clipping techniques based on the pet's coat and health condition.

3 credits
Prerequisite: GROM 1000, GROM 1030L, GROM 1100L
Corequisite: None

GROM 1210L Grooming Cuts and Styles II and Laboratory
In this course, students will employ existing grooming styles for dogs and cats. They will examine the anatomy of major breeds considering clipping patterns and coat type. They will apply master techniques in cutting patterns and styles, as well as the specific care and precautions needed for handling felines and canines.

3 credits
Prerequisite: GROM 1120L
Corequisite: None

GROM 1220L Grooming Seminar and Laboratory
In this course, students will integrate the concepts, skills, and aptitudes required in the professional practice of pet grooming. They will also apply professional techniques and skills both in the institution's laboratory and in professional settings, such as dog and cat grooming salons. Likewise, they will practice cutting techniques and procedures for handling errors and critical cases when working with pets.

2 credits
Prerequisite: GROM 1120L

Corequisite: None

GROM 1300P Grooming Practice
In this course, students will practice grooming techniques and skills in veterinary clinics, and canine and feline grooming salons, among others. They will use the proper tools, equipment, and treatments for effective grooming. They will demonstrate knowledge in general grooming, animal styling, accident prevention, and customer service.

4 credits
Prerequisite: GROM 1120L, GROM 1130L and GROM 1200L
Corequisite: None

Columbia Central University Tuition Fee Changes (effective July 1, 2024)

May 28, 2024

TO THE ENTIRE UNIVERSITY COMMUNITY

TUITION, FEES AND OTHER CHARGES

Greetings to the entire student population, faculty, and administrative employees of Columbia Central University.

During this academic year 2024-2025, Columbia Central University continues to focus on meeting the challenges of these times, and providing our students with educational experiences of quality and excellence.

Included is the amended Tuition, Fees and Other Charges disclosure applicable for students in undergraduate and graduate programs, enrolled in terms beginning on or after July 1, 2024. Contact your Treasury Office if you have any questions regarding the changes in costs or requires financial orientation.

We reiterate our commitment to continue to provide a quality service and innovative experience to our students, both in person and virtually, in order to enrich their academic experience.

We wish for your continued success!

Cordially,

Treasury Office
Columbia Central University

787.704.1020 | columbiacentral.edu | PO Box 9120, Caguas, PR 00726
Angora Industrial Park, Building G, Angora Avenue, Caguas, PR 00725

TUITION, FEES, AND OTHER CHARGES

Effective for Terms starting on or after 07/01/2024
Revised 05/28/2024

The Tuition, Fees, and Other Charges listed below are applicable to all students enrolled at Columbia Central University (CCU), with the exception of students enrolled in continuing education courses. The institution reserves the right to review costs as needed. These changes are duly notified to students prior to its implementation. Students are encouraged to be attentive for announcements regarding Tuition, Fees, and Other Charges, which are published at the following link: https://columbiacentral.edu/

TUITION AND FEES

The Tuition and Fees listed below are costs related to the offering of the courses and are applicable to each academic term and/or program for which the student is enrolled. Refer to the Institutional Refund Policy for details regarding how CCU will handle charges when a student cancels their enrollment, adds, or deletes courses during the add/drop period, or withdraws before completing a payment period.

TUITION

Undergraduate Programs

Credits per Term	Cost per Term
12 or more	3,800.00
11	3,480.00
10	3,130.00
9	2,802.00
8	2,480.00
7	2,140.00
6	1,820.00
5	1,510.00
4	1,150.00
3	840.00
2	530.00
1	180.00

Modality	Cost per Credit
Audit or non-degree seeking students	195.00

Graduate Programs

Description	Cost per Credit
Continuing Students	
Alumni students	150.00
Non-alumni students	165.00
New Students	163.00

Modality	Cost per Credit
Audit or non-degree seeking students	195.00

FEES[1]

Description	Amount
Undergraduate Programs	
Technology Resources and Administrative Services (per term)	400.00
Graduate Programs - Continuing Students	
General Fee (per term - 14 credits or more)	250.00
General Fee (per term - 13 credits or less)	150.00
Graduate Programs - New Students	
Technology Resources and Administrative Services (per term)	400.00

OTHER CHARGES

The charges listed below are discretionary and are handled at the student's request.

Description	Amount
Academic Evaluation	2.00
Certification of Contact Hours – Continuing Education	10.00
Certifications	15.00
Change of Course(s)	30.00
Collection Agency Fees (up to an additional 30% per balance referred to an agency)	0.30
Copy of Official Enrollment	2.00
Credits Transferred[2]	25.00
Diploma Duplicate	35.00
Duplicate of Student ID	5.00
Evaluation of Experience by Portfolio – Undergraduate Programs (per course)	150.00
Evaluation of Experience by Portfolio – Graduate Programs (per course)	250.00
Evaluation of Foreign Academic Credentials	100.00
Graduation Cap & Gown	Varies
Modules[3]	35.00
Official Credits Transcript	15.00
Parking Stamp (taxes included - *Cost: 4.43 + IVU (11.5%): 0.57 = 5.00*)	5.00
Proficiency Examination - Undergraduate Programs (per credit)	100.00
Proficiency Examination - Graduate Programs (per credit)	200.00
Program/Concentration Change	30.00
Removal of Incomplete (per course)	50.00

[1] Does not apply to audit and non-degree seeking students.
[2] Applies to graduate programs only. Excess of five (5) credits accepted in transfer will be charged $5.00 for each additional credit accepted.
[3] Applies to graduate programs only. For each module requested. MBA Program requirement for students who do not have a Bachelor's degree in Business Administration. Includes: Principles of Management, Principles of Marketing, Principles of Economics, Introduction to Accounting and Economics.

Description	Amount
Returned Check "NSF"	15.00
Uniform Set "Scrubs" (taxes included – *Cost: 17.70 + IVU (11.5%): 2.30 = 20.00*)	20.00
University Badge (taxes included – *Cost: 2.21 + IVU (11.5%): 0.29 = 2.50*)	2.50

DESCRIPTION OF TUITION AND FEES

Tuition - Supports costs associated with course development and instruction. It includes costs related to providing the student with high quality laboratories, including costs associated with, but not limited to the cost of furniture, equipment, software, and special materials used in the laboratory. It also supports the costs associated with creating and maintaining an environment that offers the student the opportunity to learn and practice in a workplace setting. The amount charged is based on the total credits registered for the corresponding period.

Technology Resources and Administrative Services - Supports the availability of educational and administrative technology services including, but not limited to, the following: multimedia, access to digital resource data network, library access system enhancements, updating of e-learning systems, accident insurance, degree granting process, technology safety systems, data protection systems, and technologies to support student services.

Technology Resources and Administrative Services - Supports the availability of educational and administrative technology services including, but not limited to, the following: multimedia, access to digital resource data network, library access system enhancements, updating of e-learning systems, accident insurance, technology safety systems, data protection systems, and technologies to support student services.

COST OF ATTENDANCE INFORMATION

The cost of attendance (COA) represents the estimated amount it will cost the student to go to school for an academic year. The Financial Aid Office uses the COA to determine the amount of financial aid for which the student is eligible. The components of the COA are reviewed annually by reference to current tuition and fee costs and living expense budget information published by the College Board and/or similar agencies independent of the institution. The Financial Aid Office, once it awards financial aid, will send students a financial aid offer that will include details of the costs of attendance used to determine eligibility for the academic year.

COA includes an estimate of direct and indirect costs. Direct costs such as: tuition and fees are detailed above. Indirect costs such as: food and housing, estimated cost of books, course materials, supplies and equipment, transportation, loan fees, and miscellaneous personal expenses are detailed below. Please note that COA for students who attend less than half-time, does not include miscellaneous personal expenses.

Estimated cost per term and per living arrangements

Component	Description	Living Off Campus	Living With Parent
Books, course materials, supplies, and equipment	An allowance for books, course materials, and equipment.	440.00	440.00
Federal student loan fees	An allowance for the cost of any Federal student loan fee, origination fee, or insurance premium charged to the student or the parent of the student.	1.057% for Direct Subsidized Loans and for Direct Unsubsidized Loans. As an example, the loan fee on a $5,500 loan would be $58.13. 4.228% for Direct PLUS Loans (for both parent borrowers and graduate and professional student borrowers). As an example, the loan fee on a $10,000 loan would be $422.80.	1.057% for Direct Subsidized Loans and for Direct Unsubsidized Loans. As an example, the loan fee on a $5,500 loan would be $58.13. 4.228% for Direct PLUS Loans (for both parent borrowers and graduate and professional student borrowers). As an example, the loan fee on a $10,000 loan would be $422.80.
Living expenses	An allowance for food and housing costs, to be incurred by the student attending the institution on at least a half-time basis.	4,243.00	2,758.00
Miscellaneous personal expenses	An allowance, for a student attending the institution on at least a half-time basis.	1,784.00	1,641.00
Professional licensure, certification, or a first professional credential	An allowance for the costs associated with obtaining a license, certification, or a first professional credential, for a student in a program that prepares them to enter a profession that requires such a qualification.	Varies by program	Varies by program
Transportation	An allowance, which may include transportation between campus, residences, and place of work.	561.00	516.00

The COA may also include additional components that are evaluated on a case-by-case basis per student's request. These additional components may include: an estimate of dependent care costs, and expenses related to a disability.

To apply for a COA adjustment, the student must complete an Application for Student Budget Adjustment. This document is available and can be requested at the Financial Aid Office.