

NUC University

Addendum to 2025 Catalog

Revised 11-18-2025

NUC is not enrolling in any of the programs listed in this addendum at Puerto Rico campuses at this time.

Bachelor's Degree in Science in Nursing

This version of the Bachelor's Degree in Science in Nursing program is only available to students who have transferred through the Teach Out process from Columbia Central University to NUC University, as long as they remain active and until they complete their degree. This version of the program is not available to readmission students or new students. For more information and policies related to this program, please visit the NUC University Catalog at <https://nuc.edu/politicas/#catalogo>.

OBJECTIVE:

The Bachelor Degree of Science in Nursing prepares the student to perform in a profession with high labor demand. Its main purpose is to develop qualified general nurses, leaders in health care. The student will develop the necessary skills for decision-making in health settings. The program consists of 125 credits. Classes are divided into general, related, and concentration courses. Through the courses, the student will be exposed to clinical practices in which they will perform functions and will use the skills and knowledge learned in theoretical classes with real patients.

The student will be prepared to face and meet the health service needs of patients with different conditions and in various settings. The program trains the student to acquire the necessary skills that will help them challenge the revalidation exam offered by the Nurses Examining Board and Nurses of Puerto Rico and thus be able to obtain the license that empowers them to practice in accordance with Law 254, in the category of Generalist Nurse.

MINIMUM REQUIREMENTS

21 Credits in General Courses
9 Credits in Elective in General Courses
19 Credits in Related Courses
76 Credits in Major Courses

125 Total Credits

GENERAL EDUCATION:

ENGL 1101	Basic English I	3
ENGL 1102	Basic English II	3
SEMI 1105	College Success and Professional Seminar	3
SPAN 1101	Spanish I	3
SPAN 1102	Spanish II	3
COMP 1205	Introduction to Computers	3
MATH 2002	General Mathematics	3
		21

ELECTIVES IN GENERAL EDUCATION:

(The student will select three courses for a total of 9 credits)

COMU 3010	Effective Communication	3
COPR 3011	Contemporary Problems	3
HIST 3004	History of Puerto Rico	3
HUMA 3006	Universal History	3
SOCI 2015	Principles of Sociology	3
		9

RELATED COURSES:

BIOL 1601	Human Anatomy and Physiology I	3
BIOL 1602	Human Anatomy and Physiology II	3
BIOL 1603	Microbiology	4
CHEM 3501	Foundations of Inorganic Chemistry	3
PSYC 2014	Principles of Psychology	3
STAT3103	Statistics	3
		19

MAJOR COURSES

NURS 2501	Introduction to the Nursing Profession	3
NURS 2531	Nursing Role in Patient's Health History and Physical Examination	3
NURS 2541	Pharmacology	3

NURS 2551	Nursing Role in Drug Administration: Laboratory	2
NURS 2561	Foundations of the Nursing Profession	4
NURS 2571	Foundations of the Nursing Profession: Practice	2
NURS 3101	Nursing Role in Mental Health and Psychiatry	4
NURS 3111	Nursing Role in Mental Health and Psychiatry: Practice	2
NURS 3120	Nursing Role in the Care of Adults and the Elderly I	5
NURS 3131	Nursing Role in the Care of Adults and the Elderly I: Practice	2
NURS 3141	Nursing Role in the Care of Adults and the Elderly II	5
NURS 3150	Nursing Role in the Care of Adults and the Elderly II: Practice	2
NURS 3160	Nursing Role in Maternity Care	4
NURS 3170	Nursing Role in Maternity Care: Practice	2
NURS 3180	Nursing Role in Pediatric Care	4
NURS 3190	Nursing Role in Pediatric Care: Practice	2
NURS 4010	Nursing Role in Health Information Systems	3
NURS 4030	Nursing Role in Nutrition	3
NURS 4040	Cultural Diversity in The Nursing Profession	3
NURS 4050	Nursing Role in Evidence-Based Practice: Research Process	3
NURS 4060	Nursing Role in Family and Community Care	4
NURS 4070	Nursing Role in Family and Community Care: Practice	2
NURS 4080	Nursing Seminar	3
NURS 4090	Nursing Role in Management and Leadership: Seminar	3
NURS 4100	Practicum: Nursing	

Management and Leadership: Clinical Experience	3
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76

TOTAL CREDITS

125

NOTES:

- The student does not necessarily have to follow the order of the suggested courses, but the order helps the student to complete their degree in the stipulated time. The student should be aware of taking the courses that have requirements in an order that allows them to continue taking the other courses without problems. The courses without requirements do not have a specific order. The students can enroll in them, in the semester they are offered. For the internship courses all students will be required to present certification of Hepatitis, Influenza and Chicken Pox vaccines, between others requirements.
- Students enrolled in the Bachelor's in Nursing Science must obtain at least a grade of C (70% or higher) to pass all professional and concentration courses, except those clinical practice courses that must be passed with a B (80%) or plus.
- The following courses must be approved with a grade of C or higher: BIOL 1601, BIOL 1602, BIOL 1603, SEMI 1105, CHEM 3501, PSYC 2014, STAT 3103, NURS 2501, NURS 2561, NURS 2531, NURS 2541, NURS 2551, NURS 3101, NURS 3120, NURS 3141, NURS 3160, NURS 3180, NURS 4030, NURS 4010, NURS 4040, NURS 4050, NURS 4060, NURS 4080, NURS 4090.
- The following courses must be approved with a grade of B or higher: NURS 2571, NURS 3111, NURS 3131, NURS 3150, NURS 3170, NURS 3190, NURS 4070, NURS 4100.

Bachelor's Degree in Science in Nursing (RN to BSN)

This version of the Bachelor's Degree in Science in Nursing (RN to BSN) program is only available to students who have transferred through the Teach Out process from Columbia Central University to NUC University, as long as they remain active and until they complete their degree. This version of the program is not available to readmission students or new students. For more information and policies related to this program, please visit the NUC University Catalog at <https://nuc.edu/politicas/#catalogo>.

OBJECTIVE

The purpose of the Bachelor Degree of Science in Nursing RN to BSN program is to prepare associate degree nurses at the baccalaureate level. The graduates of this program will be able to use critical judgment when designing care plans to promote, maintain, and restore the health of the individuals they serve. She (He) is a leader in her/his care who, by collaborating with the interdisciplinary team, offers quality health services.

The program also has as one of its goals to emphasize the knowledge required by the Puerto Rico Nurses Examining Board for the granting of the Generalist Nurse License, which allows the legal practice of the profession in Puerto Rico.

MINIMUM REQUIREMENTS:

15 Credits in general education
9 Credits in elective courses
9 Credits in related Courses
19 Credits in Major Courses

52 Total Credits

GENERAL EDUCATION:

COMU 3010	Effective Communication	3
COPR 3011	Contemporary Problems	3
HIST 3004	History of Puerto Rico	3
HUMA 3006	Universal History	3
SOCI 2015	Principles of Sociology	3
		15

ELECTIVES:

(The student will select three courses for a total of 9 credits)

ART 2009	History of Art	3
COMP 1205	Introduction to Computers	3
ECON 2012	Puerto Rican Economy	3
ENGL 3001	Conversational and Compositional English	3
POSC 2013	Introduction to Political Science	3
SPAN 3002	Advanced Spanish	3
		9

CORE COURSES:

CHEM 3501	Fundamentals of Inorganic Chemistry	3
CHEM 3502	Fundamentals of Onorganic Chemistry	3
STAT 3103	Statistics	3
		9

MAJOR COURSES

NURS 3503	Nursing Theories in Health Promotion	3
NURS 3504	Health Estimate for Prevention	4
NURS 3505	Principles of Research in Health and Nursing	3
NURS 4113	Nursing Process with Families and Community	4
NURS 4114	Theory and Practice in the Administration of Nursing Services	5
		19

TOTAL CREDITS

52

NOTES:

- For students with an Associate of Science Degree in Nursing from CCU, completion

of the 52 credits of the Bachelor of Science in Nursing RN to BSN is required for a grand total of 124 credits considering the 72 credits approved from CCU's Associate Degree in Science in Nursing.

- The student does not necessarily have to follow the order of the suggested courses, but the order helps the student to complete their degree in the stipulated time. The student should be aware of taking the courses that have requirements in an order that allows them to continue taking the other courses without problems. The courses without requirements do not have a specific order. The students can enroll in them, in the semester they are offered.
- Students enrolled in the Bachelor's in Nursing Science RN to BSN must obtain, at a minimum, a grade of C to pass the following courses: CHEM 3501, NURS 3504, STAT 3103, CHEM 3502, NURS 3505, COPR 3011, NURS 4113, NURS 3503, NURS 4114.

Associate's Degree in Nursing

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OBJECTIVE

The program develops nursing professionals, training them to function in health settings that offer nursing services to the client and their family, whether hospitalized, at an outpatient level or in the community, according to their preparation. The program aims to prepare future nursing professionals in the associate degree to deal with the health problems of our society, by promoting and maintaining the health of the individual, family, and community, through the satisfaction of their needs and prevention diseases, under the guidance and direction of the general nursing professional.

The associate degree for nursing professionals in this program will possess the preparation required to meet the requirements established by the Puerto Rico Nursing Examining Board. This will allow them to obtain a license as an associate nurse to legally practice their profession.

The program prepares the students to continue their studies leading to the Bachelor's in Nursing Science RN to BSN, offering the knowledge bases of health, nursing, and general sciences.

MINIMUM REQUIREMENTS:

15 Credits in General Courses

13 Credits in Related Courses

44 Credits in Major Courses

72 Total Credits

GENERAL EDUCATION:

ENGL 1101	Basic English I	3
ENGL 1102	Basic English II	3
SEMI 1105	College Success and Professional Seminar	3
SPAN 1101	Spanish I	3
SPAN 1102	Spanish II	3
		15

RELATED COURSES:

BIOL 1601	Human Anatomy and Physiology I	3
BIOL 1602	Human Anatomy and Physiology II	3
BIOL 1603	Microbiology	4
COMP 1205	Introduction to Computers	3
		13

MAJOR COURSES:

NURS 1604	Nursing Process	3
NURS 1609	Nursing Process Maternal Child	5
NURS 1610	Principles of Pharmacology	4
NURS 1611	Nursing Fundamentals	6
NURS 1612	Physiopathology of the Human Body	3
NURS 2612	Nursing Process for Children and Adolescents	5
NURS 2613	Nursing Process of the Mental and Emotional Health of the Human Being	5
NURS 2614*	Nursing Process of Adults and Geriatric I	5
NURS 2615*	Nursing Process of Adults and Geriatric II	5
NURS2616**	Seminar Integrative	3
		44
TOTAL CREDITS		72

NOTES:

- The student does not necessarily have to follow the order of the suggested courses, but the order helps the student to complete their degree in the stipulated time. The student should be aware of taking the courses that have requirements in an order that allows them to continue taking the other courses without problems. The courses without requirements do not have a specific order. The students can enroll in them, in the semester they are offered.
- Students enrolled in the Associate Degree in Nursing Sciences must obtain, at least, a grade of C to pass the following courses: BIOL 1601, NURS 1609, NURS 2612, NURS 2616, BIOL 1602, NURS 1610, NURS 2613, SEMI 1105, BIOL 1603, NURS 1611, NURS 2614, NURS 1604, NURS 1612, NURS 2615.

Associate's Degree in Pharmacy Technician

This version of the Associate's Degree in Pharmacy Technician program is only available to students who have transferred through the Teach Out process from Columbia Central University to NUC University, as long as they remain active and until they complete their degree. This version of the program is not available to readmission students or new students. For more information and policies related to this program, please visit the NUC University Catalog at <https://nuc.edu/politicas/#catalogo>.

OBJECTIVE

The purpose of the program is to develop pharmacy technicians trained to function in health settings that offer pharmacy services, whether in community, chain, institutional, specialized pharmacy, manufacturing houses, drug stores and health plan agencies, among others. The program aims to prepare future pharmacy technicians through specialty courses and Internship hours to exercise the occupation with a good pharmacy practice guide that will include the norms and standards to provide quality services, based on responsibilities and functions that are consistent with the provisions of law, under the guidance and direction of the pharmacist.

The Pharmacy Technician will possess the preparation required to meet the requirements established by Law # 247 of September 3, 2004, as amended known as the Puerto Rico Pharmacy Law. This will allow you to obtain a certification as a Pharmacy Technician to legally practice your profession in Puerto Rico.

LANGUAGE OPTION AND MODALITY

- Available in Spanish language via on ground delivery method.
- Students should only enroll in courses and

programs delivered in Spanish at NUC University if they have an adequate master of the Spanish language.

MINIMUM REQUIREMENTS:

15 Credits in General Education

68 Credits in Major Courses

83 Total Credits

GENERAL EDUCATION

ENGL 1101	Basic English I	3
ENGL 1102	Basic English II	3
SEMI 1105	College Success and Professional Seminar	3
SPAN 1101	Spanish I	3
SPAN 1102	Spanish II	3
		15

MAJOR COURSES:

PHAR 1618	Pharmaceutical Mathematics	5
PHAR 1619	Pharmacy and Marketing	4
PHAR 1620	Pharmaceutical Legislation	3
PHAR 1621	Pharmacognosy	4
PHAR 1622	Dosage	4
PHAR 1623	Dispatch Techniques	5
PHAR 1624	Pharmacotherapy I	5
PHAR 1625	Pharmacotherapy II	5
PHAR 2101	Pharmaceutical Chemistry	3
PHAR 2102	Institutional Pharmacy	3
PHAR 2103	Sterile Preparations and Aseptic Techniques	3
PHAR 2112	Internship I	11
PHAR 2113	Internship II	11
SEMI 2507	Integration Seminar to the Role of the Pharmacy Technician	2
		68
		83

TOTAL CREDITS

NOTES:

- The student does not necessarily have to follow the order of the suggested courses, but the order helps the student to complete their degree in the stipulated time. The student should be aware of taking the courses that have requirements in an order that allows

them to continue taking the other courses without problems. The courses without requirements do not have a specific order. The students can enroll in them, in the semester they are offered.

- Students enrolled in the Associate Degree program in Pharmacy Technician must obtain a minimum grade of C to pass the following courses: PHAR 1618, PHAR 1622, PHAR 2101, SEMI 2507, PHAR 1619, PHAR 1623, PHAR 2102, PHAR 1620, PHAR 1624, PHAR 2103, PHAR 1621, PHAR 1625, SEMI 1105, and a minimum grade of B to pass the following courses: PHAR 2112, PHAR 2113.

Course Descriptions

ART 2009: History of Art:

3 credits

This course is an introduction to the study of the arts and its various branches: architecture, sculpture, painting, music, literature, theater, and film. The origin and relevant historical development of the arts in the East and the West are emphasized. The influence of foreign artistic movements in Puerto Rico is also studied. The methodology of the course includes lectures, a section of comprehension readings, practical applications, discussion of works, work in pairs, critical reactions to exhibitions, reports, and presentations.

BIOL 1601: Human Anatomy and Physiology I:

3 credits

Introduction to the study of cell morphology and physiology. The topics of the human body as a whole and composition at the cellular and tissue level are discussed. The student evaluates the histology, anatomy, and physiology of the integumentary, skeletal, articular, muscular, cardiovascular, lymphatic, and respiratory systems. Oral and written presentations will be made, as well as practical exercises in the laboratory related to the course. Requires use of the science lab.

BIOL 1602: Human Anatomy and Physiology II:

3 credits

Pre-requirement: BIOL 1601

It is the continuation of the histological, anatomical, and physiological study of the nervous, endocrine, digestive, urinary, hydro electrolytic, acid/base and reproductive systems. Emphasis on the interrelation of all systems, on the coordination and normal functioning of the body. Oral and written presentations will be made, as well as practical exercises in the laboratory related to the course. Requires the use of the science lab.

BIOL 1603: Microbiology:

4 credits

Presents the study of microorganisms and their relationship with humans and their environment. The basic principles of asepsis, sanitation, disinfection, sterilization, immunology, and transmission of infectious diseases. Areas of medical microbiology are included, presented systematically in bacteriology, virology, mycology, immunology, serology, diagnostic evaluation, clinical data, and epidemiology on infectious diseases. Oral and written presentations will be made, as well as practical exercises in the laboratory related to the course. Requires use of science lab.

CHEM 3501: Foundations of Inorganic Chemistry:

3 credits

The course comprises a study of composition, classification, interaction, and nomenclature of matter in chemical terms. The periodic table of elements and measurement and security systems are examined with them. An understanding of chemistry and the importance of its application in the health field is developed in the student. Requires the use of the science lab.

CHEM 3502: Foundations of Organic Chemistry:

3 credits

Pre-requirement: CHEM 3501

This course provides the student with the opportunity to acquire fundamental and necessary knowledge about the nomenclature, chemical and physical properties of organic compounds. Compounds that contain carbon in their structure are studied and provide the components that make up living organisms. Applications of this knowledge will be made to the practice of nursing, such as the areas of medicine, biochemistry, and nutrition. This course is offered in person and not in person. Requires the use of the science lab.

**COMP 1205: Introduction to Computers:
3 credits**

This course exposes the student to the world of computers. A brief history of computers, applications, advantages, and the composition of a computerized system is presented. It offers knowledge about the electronic equipment used to process data, its interrelation with the computer and how it communicates using the current operating system and application programs to create presentations, electronic sheets, publications, and documents. He has practice in the basic handling of the Internet and E-mail. Lectures, demonstrations, practical and application exercises, among others, will be used to teach the course. Requires laboratory use.

**COMU 3010: Effective Communication:
3 credits**

The purpose of the course is for the student to develop oral and written communication skills, the processes, and resources to achieve effective communication. The importance of interpersonal relationships and the impact of the mass media will be highlighted. The teaching and learning process will be carried out through the different techniques of presentations, oral reports, readings alluding to the objectives of the course, and the use of technological and organizational innovations.

**COPR 3011: Contemporary Problems:
3 credits**

The course presents and analyzes the current problems that affect the world and Puerto Rican society. Recent world social, political, economic, and cultural situations are discussed, linking them with Puerto Rico. Individual and group activities are provided that stimulate critical thinking skills and attitudes, analysis, and reflection of current important issues in behavior of personal and social commitment.

**ECON 2012: Puerto Rican Economy:
3 credits**

The main purpose of the course is for the student to analyze the economic development of Puerto Rico from the pre-Columbian stage until today. The various sources of production are studied and how they were determined by aspects of government economic policy in each historical stage. The effect of the economy on the way of life of the Puerto Rican people is also analyzed with an emphasis on the present. The course is developed through the conceptualization, search and practical application of economic models, lectures, analysis of readings, data and graphs, critical reactions, and audiovisual presentations.

**ENGL 1101: Basic English I:
3 credits**

The purpose of this course is to improve the language skills of listening and speaking of the learner. Listening focuses on superficial understanding and specific details, while speaking emphasizes the skills necessary for daily communication. In addition, students will increase their vocabulary and study basic grammatical structures. It includes listening activities, oral presentations, class discussions, lectures, and short readings.

**ENGL 1102: Basic English II:
3 credits**

Pre-requirement: ENGL 1101

This course is designed to develop students' skills in reading, writing, and critical thinking. Students will expand their vocabulary, increase their ability to analyze text, gain knowledge of basic grammatical structures, and improve their writing skills. Students will also continue to develop their listening and speaking skills. It includes selected short readings, class discussions, lectures, and writing paragraphs.

ENGL 3001: Conversational and Compositional English:

3 credits

The purpose of the course is to develop oral and written communication skills, as well as the processes and resources to achieve effective communication using vocabulary, grammar, critical thinking, listening, speaking and pronunciation skills. Emphasizes the importance of communication and the impact on the mass media. The teaching and learning process is carried out through different techniques of presentations, oral reports, readings related to the objectives of the course, the use of technology and organizational innovations.

HIST 3004: History of Puerto Rico:

3 credits

The course intends for the student to analyze the socio-historical process of Puerto Rico from pre Columbian times to the present. In addition, a historical-graphic recount is made in which the facts and the political-economic relations that have been decisive in the process of cultural development of the country under different sovereignties are identified. The course is offered through lectures, socialized discussion, analysis of newspaper and magazine articles, Socratic dialogues, oral reports, and audiovisual presentations.

HUMA 3006: Universal History:

3 credits

The course is related to the study of those historical events and factors that gave way to two eras: the Modern Age and the Contemporary. Attention is given to relevant historical movements such as the great intellectual, economic, political, scientific, religious, and sociocultural revolutions. The course ends with the analysis of the events of greatest magnitude and global impact in the XXI century. Lectures, reading comprehension, critical thinking skills, data and graph analysis, Socratic dialogue,

monographic work, and audiovisual presentations are used.

MATH 2002: General Mathematics:

3 credits

The course is designed for the student to acquire knowledge and skills in basic mathematical operations for solving mathematical operations with real numbers in all their expressions. In addition, to know and interpret the Roman numerals.

NURS 1609: Nursing Process Maternal Child:

5 credits

Pre-requirements: BIOL 1603, NURS 1612, NURS 2613

In this course the student will apply nursing techniques, acquired to provide care to women during the pre-conceptional stage, pregnancy, childbirth, or cesarean section, postpartum in addition to the immediate care of the newborn. You will use the nursing process and information management technology to guide your actions with the pregnant woman and her family. The process of pregnancy, childbirth and the puerperium of women is discussed, in addition to the health care of the healthy newborn and care. They will make presentations and simulated nursing interventions offering care to the mother and the newborn. It requires clinical experience in various settings

NURS 1610: Principles of Pharmacology:

4 credits

Introduces students to the field of pharmacology and its relationship to customer care. It includes the study of drugs, their action, side effects, and situations and practices. It focuses on the role and responsibility of nursing professionals in the management and administration of medications, use, adult and pediatric doses, and nomenclatures of various agents. The student will demonstrate the dosage, administration, and nursing skills required

when preparing medications, using simulation and information management technology. Requires use of the nursing laboratory.

**NURS 1611: Nursing Fundamentals:
6 credits**

Pre-requirements: BIOL 1601, NURS 1604

Course designed in a core way, provides the student with principles and basic skills for managing the client framed in health promotion, disease prevention, treatment, rehabilitation, and support in case of death. Health knowledge is provided based on concepts: asepsis, safety, skin integrity, sexuality, spirituality, death and grief, and information management technology, among others. Different evaluation methods will be used such as: course portfolio, presentations and simulated nursing interventions in care directed to a patient or community. It requires the use of the nursing laboratory and could use other scenarios.

**NURS 1612: Physiopathology of the Human Body:
3 credits**

Pre-requirements: BIOL 1601, BIOL 1602, NURS 1611

This course presents the physiological processes of the common and recurrent alterations of the human being in its growth and development. The student analyzes anthropological factors of the various pathological processes, as well as the risk factors of the stressful, nutritional, and genetic environment that cause disease. Diagnostic tests, clinical manifestations and treatment methods used in various pathological processes are discussed, in addition to the use of technology in information management. Knowledge will be applied through course portfolio, presentations, and simulated nursing interventions in patient-directed care. It requires the use of the nursing laboratory and could use other scenarios.

NURS 2501: Introduction to the Nursing Profession: 3 credits

In this course the student will explore the basic principles and concepts of the nursing profession. You will analyze the historical evolution and contribution of several prominent theorists in the profession. It will examine the different dimensions and roles of nursing care today, taking into consideration the legal aspects that govern the profession. Likewise, they will analyze the concepts of health promotion and maintenance and the importance of the nursing role in health information systems. This course has an additional 90 hours of outside work. The student will carry out the activities assigned in the External Work Component.

**NURS 2531: Nursing Role in Patient's Health History and Physical Examination:
3 credits**

In this course, the student will develop the fundamental skills to carry out a health history and a cerebrospinal fluid physical examination in healthy or sick adult individuals, integrating an aspect of cultural diversity. It will identify the frequent systematic alterations of health and local disorders of the individual to carry out a nursing estimate, differentiating between the subjective and objective data offered by the client against the findings obtained during the physical examination. This course has an additional 90 hours of outside work. The student will carry out the activities assigned in the External Work Component.

**NURS 2541: Pharmacology:
3 credits**

Pre-requirement: NURS 2501, NURS 2561, NURS 2571

In this course, the student will analyze the basic principles of pharmacology and the ethical-legal aspects in the safe administration of drugs in the Nursing Role professionals. You will examine the historical background, the different classifications and categories of

drugs, and the mechanisms of action in the human body through the different systems. Likewise, it will integrate the nursing process for a safe administration of medications. This course has an additional 90 hours of outside work. The student will carry out the activities assigned in the External Work Component.

NURS 2551: Nursing Role in Drug Administration: Laboratory:
2 credits

Pre-requirement: MATH 2002, NURS 2501, NURS 2561, NURS 2571

In this course, the student will be able to develop the necessary skills for the execution of the procedures required in the calculation and dosage of medications through the different routes of administration. Ethical and legal aspects in the safe administration of medicines and different 427 medical prescriptions are discussed. The metric, pharmaceutical and home systems are integrated for the conversion and calculation of drugs. Apply the nursing process in the safe administration of medications. This course has an additional 120 hours of outside work. The student will carry out the activities assigned in the External Work Component.

NURS 2561: Foundations of the Nursing Profession:
4 credits

Pre-requirement: BIOL 1601, NURS 2501

Concurrent: NURS 2571

In this course the student will examine the Nursing Role as a profession and practice. Fundamental nursing concepts such as holistic health, wellness, direct care, critical thinking, nursing process, communication, safety, infection control, and basic care for nursing practice are introduced. It will analyze the nursing process as a strategy for solving the client's health problems. It will value the importance of therapeutic communication in the identification of needs when interacting with the client, family, significant others, and members of the health team. This course has an additional 150 hours of outside work. The

student will carry out the activities assigned in the External Work Component.

NURS 2571: Foundations of the Nursing Profession: Practice:

2 credits

Pre-requirement: BIOL 1601, NURS 2501

Concurrent: NURS 2561

This course introduces the student to the basic knowledge and skills of the nursing role in the dependent, independent, and interdependent functions of the practice. The student will apply the nursing process in solving problems related to the basic needs of the client and their safety. It will integrate therapeutic communication skills to establish relationships with clients, families, significant others, and members of the health team. Perform basic direct care skills to assist the client and family in promoting, restoring, and maintaining health. You will use critical thinking skills when performing critical nursing interventions in client and family care. The course consists of 30 hours of skills laboratory and 45 hours of clinical practice. This course has an additional 30 hours of external work corresponding to the laboratory component. The student will carry out the activities assigned in the External Work Component.

NURS 2612: Nursing Process for Children and Adolescents:

5 credits

Pre-requirements: BIOL 1603, NURS 1612, NURS 2613

In this course, the student will use the knowledge acquired about the nursing process to intervene with the child and adolescent with common and recurrent conditions in these stages of growth and development, using technology in information management. Diseases that affect the health of the pediatric population and measures for promotion, disease prevention and restoration of health are discussed. Simulated nursing presentations and interventions will

be made. It requires clinical experience in various settings.

NURS 2613: Nursing Process of the Mental and Emotional Health of the Human Being:

5 credits

Pre-requirements: NURS 1610, NURS 1611

This course provides the student with knowledge about the historical, ethical-legal, cultural, and spiritual background of the field of mental health, biopsychosocial, spiritual, and family factors. The nursing process is used integrating different theories to explain personality and behavior. Prevention levels are applied to restore and maintain mental health in individuals, groups, and families. The student makes oral presentations integrating knowledge and simulation tools in their interventions using technology in information management. It requires clinical experience in various settings. This course is offered face-to-face and not face-to-face.

NURS 2614: Nursing Process of Adults and Geriatric I:

5 credits

Pre-requirements: NURS 1609, NURS 2612

In this course the student acquires knowledge about pathological problems that affect adults and the elderly. They will use nursing skills to assist patients with altered basic needs that require medical or surgical care using information management technology. Assistance to the individual is focused on the pre, intra and post-operative phase, with immunological, cardiovascular, respiratory, hematological, endocrine alterations and in the balance of fluids and electrolytes. The student will demonstrate with oral, written and interventions with the simulation the techniques of assistance with the patient. It requires clinical experience in various settings.

NURS 2615: Nursing Process of Adults and Geriatric II:

5 credits

Pre-requirement: NURS 2614

In this course the student continues to acquire knowledge about the pathological problems of adults and the elderly. It focuses on the care of the individual with neoplasia, gastrointestinal, neurological, integumentary, urinary, reproductive, musculoskeletal disorders, in addition to diseases of the eyes, ears, nose and throat. The student will use the nursing process using information management technology to guide assistance to the individual with altered human needs. The student will demonstrate with oral and written works and interventions simulating the assistance techniques in the patient. It requires clinical experience in various settings.

NURS 2616: Seminar Integrative:

3 credits

Pre-requisite: NURS 2614

This course helps the student to transition into their role as a professional nurse in the world of work. Knowledge learned from previous courses is integrated so that they can prepare for the bar exam. They acquire the necessary knowledge and skills through simulations of revalidation exam, job interview, resume preparation and search for opportunities to continue university studies. In addition, current changes in the health of the people and in the health systems available for community service and existing and important controversies are discussed. Capstone course to enroll in the last term.

NURS 3101: Nursing Role in Mental Health and Psychiatry:

4 credits

Pre-requirement: NURS 2501, NURS 2531, NURS 2541, NURS 2551, NURS 2561, NURS 2571

Concurrent: NURS 3111

In this course the student will examine the historical evolution, theoretical models and

concepts that influence the professional practice of psychiatric nursing. They will analyze the different mental health disorders, risk factors, needs and their treatments. Will determine the changes in behavior and personality of the individual during the different stages of the life cycle. It will integrate the principles of therapeutic communication, legal and spiritual aspects, and the findings of evidence-based practice. This course requires the student to complete an additional 150 hours of outside work. This course is offered face-to-face and not face-to-face.

**NURS 3111: Nursing Role in Mental Health and Psychiatry: Practice:
2 credits**

Pre-requirement: NURS 2501, NURS 2531, NURS 2541, NURS 2551, NURS 2561, NURS 2571

Concurrent: NURS 3101

In this course the student will demonstrate cognitive, affective, and psychomotor skills and attitudes that allow them to offer direct nursing care safely and effectively to individuals, families, and groups at risk of developing mental health disorders and will examine risk factors, needs and treatments by intervening with the population suffering from mental health disorders. In addition, it will integrate the nursing process, therapeutic communication skills, ethical, cultural and leadership aspects when offering nursing care to the population suffering from mental health disorders in various health settings. This course consists of 90 hours of practice.

**NURS 3120: Nursing Role in the Care of Adults and the Elderly I:
5 credits**

Pre-requirement: NURS 2501, NURS 2531, NURS 2541, NURS 2551, NURS 2561, NURS 2571

Concurrent: NURS 3131

In this course, the student focuses on the nursing care and collaborative management of adults and elderly individuals with health

problems which prevent their total independence in the management and fulfillment of their basic needs. Emphasis is placed on caring for the client experiencing surgery, cancer, HIV / AIDS, fluid and electrolyte imbalance, metabolic imbalance, and Ph; cardiovascular, respiratory, and endocrine problems. This course has an additional 180 hours of outside work. The student will carry out special work on a topic related to the course.

**NURS 3131: Nursing Role in the Care of Adults and the Elderly I: Practice:
2 credits**

Pre-requirement: NURS 2501, NURS 2531, NURS 2541, NURS 2551, NURS 2561, NURS 2571

Concurrent: NURS 3120

In this course, the student develops and applies the skills and competencies necessary to carry out a holistic and effective nursing care aimed at adult and elderly client with health disorders. Emphasis is placed on the application and evaluation of skills related to metabolic and endocrine, cardio-respiratory health problems and disorders related to the perioperative process. This course consists of 90 hours of practice.

**NURS 3141: Nursing Role in the Care of Adults and the Elderly II:
5 credits**

Pre-requirement: NURS 3120, NURS 3131

Concurrent: NURS 3150

In this course, the student focuses on the nursing care and collaborative management of adults and elderly individuals with health problems which prevent their total independence in the management and fulfillment of their basic needs. Emphasis is placed on the care of the client who experiences integumentary alterations and burns, shock and trauma, musculoskeletal, renal, gastrointestinal, neurological, sensory-perceptual, and reproductive problems. This course requires the student to complete an additional 180 hours of outside work.

**NURS 3150: Nursing Role in the Care of Adults and the Elderly II: Practice:
2 credits**

Pre-requirement: NURS 3120, NURS 3131

Concurrent: NURS 3141

In this course, the student develops and applies the skills and competencies necessary to carry out a holistic and effective nursing care aimed at adult and elderly clients with health disorders. Emphasis is placed on the application and evaluation of skills related to neurological, hematological, gastrointestinal, skeletal muscle and integumentary health problems, in addition to the management of the client in shock and trauma. The course consists of 90 hours of clinical practice.

NURS 3160: Nursing Role in Maternity Care:

4 credits

Pre-requirement: NURS 2501, NURS 2531, NURS 2541, NURS 2551, NURS 2561, NURS 2571

Concurrent: NURS 3170

The purpose of this course is to analyze the characteristics, needs and problems of the family during the cycle of pregnancy, birth, and adaptation to extrauterine life. Emphasis on the factors involved in human sexuality, the male and female reproductive system, and the growth and development process. They will apply the nursing process to the woman and family in each of the stages of the cycle of pregnancy, birth, and adaptation to extra uterine life. This course has an additional 150 hours of outside work.

**NURS 3170: Nursing Role in Maternity Care: Practice:
2 credits**

Pre-requirement: NURS 2501, NURS 2531, NURS 2541, NURS 2551, NURS 2561, NURS 2571

Concurrent: NURS 3160

In this course the student will assess the Nursing Role in maternity care as a fundamental part of health services for the

population of pregnant women and newborns. Demonstrate basic skills and attitudes necessary to provide direct care to pregnant women and infants safely and effectively. It will integrate the nursing process, therapeutic communication skills, cultural aspects and leadership when offering nursing care to the pregnant woman, the newborn and their family in various health settings.

NURS 3180: Nursing Role in Pediatric Care:

4 credits

Pre-requirement: NURS 2501, NURS 2531, NURS 2541, NURS 2551, NURS 2561, NURS 2571

Concurrent: NURS 3190

In this course the student will analyze the different stages of growth and development of the healthy child and adolescent, with special needs and health disorders. They will argue about the importance of the role of family and culture in child and adolescent care. It will examine the legal ethical aspects and the regulations that govern the practice of nursing to offer safe and effective care to children and adolescents. Integrate the evidence-based nursing process safely and effectively when intervening with children and adolescents with health disorders. This course has an additional 120 hours of outside work. The student will carry out special work on a topic related to the course.

NURS 3190: Nursing Role in Pediatric Care: Practice:

2 credits

Pre-requirement: NURS 2501, NURS 2531, NURS 2541, NURS 2551, NURS 2561, NURS 2571

Concurrent: NURS 3180

In this course the student will demonstrate the skills and attitudes necessary to offer direct care to children and adolescents with health disorders in a safe and effective way. It will integrate the nursing process, therapeutic communication skills, ethical,

cultural and leadership aspects when offering nursing care to children, adolescents, and their families in various health settings. You will apply the nursing process in the promotion, restoration and maintenance of health and disease prevention according to the stage of growth and development. This course consists of 90 hours of practice.

NURS 3503: Nursing Theories in Health Promotion:

3 credits

This course introduces the students to theories in nursing. The evolution of theories is discussed, emphasizing assumptions, sources, and logical reasoning; in addition to its development and organization process to predict, establish and examine the phenomena that make up the practice of nursing. The main exponents of nursing theories are known, including their models and concepts. An educational talk will be applied with theorizing concepts, to improve customer care.

NURS 3504: Health Estimate for Prevention:

4 credits

This course initiates the student in the development of skills of interviewing clients, taking a nursing history and physical examination, as well as in the theoretical knowledge to interpret the clinical situations and make decisions about the care and prevention of diseases. Factors that promote man's self-realization from infancy to aging are analyzed to develop nursing skills in health promotion. A health history and physical estimate will be made.

NURS 3505: Principles of Research in Health and Nursing:

3 credits

Pre-requirements: NURS 3503, NURS 3504, STAT 3103

This course offers the student the opportunity to assess the changes in health practice that arise from research, introducing the evidence

base into practice. Different statistical designs and analysis that the researcher can use when conducting a study are described. Nursing research that promotes knowledge and practice of the discipline will be analyzed by carrying out a research project at the end of the course, focusing on the ethical considerations of the patient and the researcher.

NURS 4010: Nursing Role in Health Information Systems:

3 credits

In this course, the student will examine the Nursing Role in the integration of competences and skills of health information systems in the face of the adoption of new technologies. Assess the main issues related to information in nursing, ethical and legal controversies, the quality, and safety of the patient. Also, they will analyze the impact of technology on the use of the electronic medical record and its integration into health scenarios. Likewise, they will argue about the evolution of technology and the impact of information technology in the future of nursing. This course has an additional 90 hours of outside work. The student will carry out the activities assigned in the External Work Component.

NURS 4030: Nursing Role in Nutrition:

3 credits

In this course the student will be able to analyze the role of the nursing professional in the estimation, analysis, and interventions in the care of nutritional needs in all stages of the life cycle. Emphasis is placed on the discussion of essential nutrients and the importance of the food pyramid for the maintenance of nutritional health. Likewise, they will analyze the influence of food on weight control, the most common health disorders, and pathologies. This course has an additional 90 hours of outside work.

NURS 4040: Cultural Diversity in The Nursing Profession:

3 credits

In this course the student will be able to examine the influence of cultural diversity in nursing practice with the client, individuals, populations and communities. You will analyze the impact of cultural diversity, beliefs, values and their influence on health care and nursing practice. You will explore your own cultural beliefs related to health care, client behaviors, cultural perspectives, and cross-cultural communication barriers. This course requires the student to complete an additional 90 hours of outside work.

NURS 4050: Nursing Role in Evidence-Based Practice: Research Process:

3 credits

Pre-requirement: STAT 3103

In this course, students will be able to assess the historical evolution of evidence-based research and practice as a role in the nursing profession. Analyze the phases of the research process and the ethical-legal aspects to use the research findings in clinical practice. They will discuss the characteristics of quantitative and qualitative research and analyze the results of research articles and their impact on the nursing profession. This course has an additional 90 hours of outside work. The student will carry out the activities assigned in the External Work Component.

NURS 4060: Nursing Role in Family and Community Care:

4 credits

Pre-requirement: NURS 4010, NURS 4030, NURS 4090

Concurrent: NURS 4070

The student will apply theoretical and empirical knowledge in the use of the nursing process in populations and community settings to promote, maintain and restore health. The diverse roles and settings of the community and public health nursing professional are examined in the evaluation, applying research skills, effective

communication, and meeting the health needs of populations and communities. This course has an additional 120 hours of outside work.

NURS 4070: Nursing Role in Family and Community Care: Practice:

2 credits

Pre-requirement: NURS 4010, NURS 4030, NURS 4090

Concurrent: NURS 4060

The student will exercise theoretical and empirical knowledge in the development of educational care plans and actions to promote, maintain and restore health in populations and communities. It will apply the roles of the community and public health nursing professionals in the different assessment scenarios, applying research skills, effective communication and meeting the health needs of populations and communities. This course consists of 90 hours of practice.

NURS 4080: Nursing Seminar:

3 credits

Pre-requirement: NURS 3140, NURS 3150, NURS 3160, NURS 3170, NURS 3180, NURS 3190, NURS 4010, NURS 4030, NURS 4040, NURS 4050, NURS 4090

This course provides the student with the strategies and content introductory to the nursing exam Puerto Rico. The course is designed using the different categories needs of the client: safe and effective care environment, promotion, and maintenance of health, psychosocial integrity, and physiological integrity to offer nursing care to diverse populations and health settings. Likewise, the student will apply prior scientific knowledge of the different nursing roles with a focus on the most common health disorders and disorders in the various specialty areas of the profession: medicine and surgery, mental health and psychiatry, maternity, pediatrics, research, community, and leadership in nursing. This course has an additional 90

hours of outside work.

NURS 4090: Nursing Role in Management and Leadership: Seminar: 3 credits

In this course the student will be able to analyze the basic foundations of leadership and management in health services. Emphasis is placed on the application of advanced communication skills in collaboration with the multidisciplinary team. The different types of leadership, the characteristics of a leader and organizational changes to perform better teamwork will be discussed. They will also evaluate leadership theories and models to promote safe and effective work environments. Through the seminar they will be able to apply the steps of the problem-solving method to deal with complex issues within health organizations. This course has an additional 90 hours of outside work. The student will carry out special work on a topic related to the course.

NURS 4100: Practicum: Nursing Management and Leadership: Clinical Experience: 3 credits

Pre-requirement: NURS 3140, NURS 3150, NURS 3160, NURS 3170, NURS 3180, NURS 3190, NURS 4010, NURS 4050, NURS 4090, NURS 4090 Concurrent: NURS 4080

In the Practicum clinical experience course, the practitioner will have the opportunity to apply and develop the administrative, leadership and supervisory skills discussed in the theoretical course. The student will use his leadership alternately with other students to coordinate and monitor student performance in practice. In addition, he will be involved in administrative matters related to nursing services and will apply a method of problem solving and research to optimize the quality of nursing services. At the same time, it will apply competences in pharmacology and will offer the care to the assigned clients; in addition, it will fulfill the functions of the clinical unit and the tasks for academic

purposes. In the same way, he will assume ethical- legal responsibility and humanistic and Christian commitment during his performance. This practice will be offered concurrent with the theoretical course.

NURS 4113: Nursing Process with Families and Community: 4 credits

Pre-requirements: NURS 3503, NURS 3504, NURS 3505, STAT 3103

This course provides the student with the opportunity to examine environmental stressors that alter the well-being of family and groups in the community. The student is directed to visualize the family and the community as responsible agents in their health practices. Using research knowledge is deepened, and principles applied for promotion, restoration of health, and prevention of disease in individuals, families, and community groups. An estimate of the needs of a population is made.

NURS 4114: Theory and Practice in the Administration of Nursing Services: 5 credits

Pre-requirements: NURS 3503, NURS 3504, NURS 3505, NURS 4113, STAT 3103

This course provides the opportunity to synthesize the knowledge acquired to promote the well being of groups of individuals in various health settings. The role of the leader is valued and exhibited in promoting changes that improve nursing practice using the results of scientific research. Different leadership roles, interpersonal relationship problems, basic knowledge of the personnel evaluation process, and patterns of task assignment in the hospital environment are analyzed. Analysis of situations is carried out to apply the role of leader. This "Capstone" course is offered face-to-face and not face-to-face. It requires clinical practice in various settings.

POSC 2013: Introduction to Political Science:

3 credits

El objetivo principal del curso es estudiar el desarrollo de las formas de asociación política que han existido desde la antigüedad hasta el presente en los grupos humanos. Se pretende explicar la naturaleza y el propósito del Estado. Se identifican y se explican los elementos que se consideran en el desarrollo y la estructura constitucional de gobiernos actuales. El curso se ofrece mediante conferencias, análisis de datos, gráficos, lecturas y artículos periodísticos, trabajos en grupos, discusión socializada, encuestas en investigación acción y reacciones críticas. Este curso se ofrece presencial y no presencial.

PSYC 2014: Principles of Psychology:

3 credits

The course is an introduction to the basic concepts of psychology and its application to students' personal and professional lives. Throughout the course, students learn about the biological basis of human behavior, learning and memory, motivation and emotion, the human development life cycle, personality development, and other topics related to human behavior. Emphasis is placed on scientific research to study and analyze human behavior. This course is offered in both onground and online modalities.

PHAR 1618: Pharmaceutical Mathematics:

5 credits

The purpose of the course is for students to master the skills in pharmaceutical mathematics that will enable them to assist pharmacists in dispensing different types of prescriptions and medical orders received in different pharmacy settings. This includes basic operations, different measurement systems used in dispensing, dose calculations, solution preparations, formula reductions and increases, and temperature. The teaching and learning process will be carried out through

lectures, teamwork, and interactive exercises. The application of the concepts and skills learned through verbal problems is required in the laboratory.

PHAR 1619: Pharmacy and Marketing:

4 credits

The purpose of the course is for the student to see the pharmacy from an administrative point of view, feeling empowerment of the business to maintain the clientele and be at the competitive level of the market. The historical background of the pharmacy, the responsibilities and administrative functions, the different types of pharmacies and the functions of the pharmacy technician, operational and administrative aspects of a pharmacy, including purchasing, inventory, merchandise management and marketing are discussed. Provides the student with basic skills in managing a business. The teaching and learning process will be carried out through conferences, socialized discussion, teamwork, and interactive exercises.

PHAR 1620: Pharmaceutical Legislation:

3 credits

The purpose of the course is for the student to obtain knowledge, mastery and recognize the scope of the laws and regulations as they are applied in their tasks, functions, and responsibilities. State and federal laws and regulations that govern the practice of pharmacy in Puerto Rico, the Controlled Substances Law, and the Regulations that regulate the Manufacture, Distribution, and Dispensing of drugs, among others, are discussed. The teaching and learning process will be carried out through conferences and socialized discussion.

PHAR 1621: Pharmacognosy:

4 credits

Pre-requirement: PHAR 1618

The purpose of the course is for the student to acquire knowledge of drugs obtained from animal, vegetable, and microorganism sources to exercise and apply the knowledge,

skills in their tasks and responsibilities. Crude drugs of natural origin and microorganisms or biotechnology are studied, drugs that are obtained from natural products and that through modifications in the extraction and purification processes are elaborated in laboratories, vitamins, minerals, carbohydrates, alkaloids, glycosides, anti-infectious and biological products, medicinal plants, natural and homeopathic products. The teaching and learning process will be carried out through conferences, socialized discussion, and teamwork. The course requires a laboratory. This course is offered face-to-face and not face-to-face.

PHAR 1622: Dosage:

4 credits

Pre-requirement: PHAR 1618

The purpose of the course is for the student to acquire basic knowledge related to the doses and 442 routes of administration of drugs. The concepts of doses, routes of administration, dosage forms, drug classification, self-medication, concepts to dispense drugs correctly and precisely so as not to make mistakes, abbreviations that are used in the interpretation of prescriptions, calculations and interactions of the drugs are discussed. medicines. Emphasize the use of books or internet technology when searching for drug information. The teaching and learning process will be carried out through conferences, socialized discussion, teamwork, and interactive exercises. The course requires a laboratory. This course is offered face-to-face and not face-to-face.

PHAR 1623: Dispatch Techniques:

5 credits

Pre-requirements: PHAR 1618, PHAR 1621, PHAR 1622, PHAR 1624, PHAR 1625

The purpose of the course is for the student to acquire knowledge and skills in the preparation of different dosage forms and the dispensing of prescriptions. The student becomes familiar with and uses the pharmacy equipment for dispensing compounding

prescriptions or extemporaneous preparations. The RX 30 computerized system is also used. The teaching and learning process will be carried out through lectures, socialized discussion, teamwork, and interactive exercises. The course requires a laboratory.

PHAR 1624: Pharmacotherapy I:

5 credits

The purpose of the Pharmacotherapy I course is for the student to acquire basic knowledge related to drugs, supplements or products and their pharmacological effect. The human body is studied from the structural and functional point of view and the therapy of medications for the treatment and relief of symptoms in the most common pathological disorders. It includes pharmacokinetics, pharmacodynamics, adverse effects, and drug interactions, among others. Some of the systems discussed are Nervous, Cardiovascular, Hematological Systems, Muscular Skeletal System, ophthalmic and auditory conditions, and the treatment of Cancer. The teaching and learning process will be carried out through conferences, socialized discussion, teamwork, and interactive exercises. The course requires a laboratory.

PHAR 1625: Pharmacotherapy II:

5 credits

The purpose of the Pharmacotherapy II course is for the student to acquire basic knowledge related to drugs, supplements or products and their pharmacological effect. The human body is studied from a structural and functional point of view and drug therapy for the treatment and / or relief of symptoms in the most common pathological disorders. It includes pharmacokinetics, pharmacodynamics, adverse effects, and drug interactions, among others. Some of the systems discussed are Respiratory, Digestive, Endocrine, Genito-Urinary and Integumentary Systems. The teaching and learning process will be carried out through conferences,

socialized discussion, teamwork, and interactive exercises. The course requires a laboratory.

**PHAR 2101: Pharmaceutical Chemistry:
3 credits**

Pre-requirement: PHAR 1618

The purpose of the course is for the student to acquire knowledge related to the basic principles of the states of matter; solid, liquid and gaseous and understanding about the composition of drugs and biological and pharmacological processes. The basic concepts about the composition, structure, properties and behavior of matter, the atomic theory, the periodic table, solutions, acids and bases, the theoretical aspects of inorganic and organic chemistry that help to understand the processes of the body are discussed. and substances of biological and pharmaceutical importance.

**PHAR 2102: Institutional Pharmacy:
3 credits**

Pre-requirement: PHAR 1618

The purpose of the course is to develop in the student the responsibility, in a precise and concrete way, in the dispensing of medicines, with high quality and safety to the patient within the institutional pharmacy. The procedures that are carried out, the types of hospitals, accreditation processes, minimum quality standards, drug formulations, different systems of dispensing, distribution, and procedures on the handling of different medications. Emphasis on the competencies of the Pharmacy Technician, interpretation of medical orders, dispensing, pharmaceutical calculations, reconciliation of medications including controlled substances. The teaching and learning process will be carried out through conferences, socialized discussion, teamwork, and interactive exercises.

**PHAR 2103: Sterile Preparations and
Aseptic Techniques
3 credits**

Pre-requirements: PHAR 1618, PHAR 2102

The purpose of the course is for the student to master aseptic techniques to guarantee the quality of the product and patient safety and to train them for the dispensing of sterile parenteral preparations. Emphasis is placed on hand washing techniques, pharmaceutical calculations, references, safety techniques, aseptic techniques in parenteral composition, proper use of equipment, preparation of sterile products, and safe handling of antineoplastic drugs. The teaching and learning process will be carried out through conferences, socialized discussion, teamwork, and interactive exercises.

**PHAR 2112: Internship I:
11 credits**

Pre-requirements: ENGL 1101, ENGL 1102, PHAR 1618, PHAR 1619, PHAR 1620, PHAR 1621, PHAR 1622, PHAR 1623, PHAR 1624, PHAR 1625, PHAR 2101, PHAR 2102, PHAR 2103, SEMI 1105, SPAN 1101, SPAN 1102

The purpose of the course is to integrate, apply and practice the knowledge and skills acquired during the approved courses in a real work setting. The internship phase is carried out within a community and / or institutional pharmacy, under the direct supervision of a licensed pharmacist duly authorized by the Board of Pharmacy in Puerto Rico and designated as the preceptor pharmacist. The total hours required during Internship I is 500 hours.

**PHAR 2113: Internship II:
11 credits**

Pre-requirements: ENGL 1101, ENGL 1102, PHAR 1618, PHAR 1619, PHAR 1620, PHAR 1621, PHAR 1622, PHAR 1623, PHAR 1624, PHAR 1625, PHAR 2101, PHAR 2102, PHAR 2103, PHAR 2112, SEMI 1105, SEMI 2507, SPAN 1101, SPAN 1102

The purpose of the course is to integrate, apply and practice the knowledge and skills acquired during the approved courses in a real work setting. The internship phase is carried out within a community and / or institutional pharmacy, under the direct supervision of a

licensed pharmacist duly authorized by the Board of Pharmacy in Puerto Rico and designated as the preceptor pharmacist. The total hours required during Internship II is 500 hours.

SEMI 1105: College Success and Professional Seminar:

3 credits

This course aims to develop students' skills in oral and written communication, the use of technology, information literacy, and critical thinking in relation to a variety of topics linked to the process of adapting to university life and their personal, academic, and professional development. This course will be assessed through written or oral assignments, exams or short tests, and multiple activities. It is offered in both onground and online modalities.

SEMI 2507: Integration Seminar to the Role of the Pharmacy Technician:

2 credits

Pre-requirements: PHAR 1618, PHAR 1619, PHAR 1620, PHAR 1621, PHAR 1622, PHAR 1623, PHAR 1624, PHAR 1625, SEMI 1105

The purpose of the course is to support the student in the transition to the role of Pharmacy Technician in the workplace. Emphasis is placed

SPAN 3002: Advanced Spanish:

3 credits

Pre-requirement: SPAN 1102

The SPAN 3002 course places the student in front of the humanizing context represented by their language and the literary work. He studies literary human beings: the poet, the essayist, the storyteller who uses language as an instrument of his literary creation. The teaching of language and literature is integrated with grammatical, orthographic and morphosyntactic explanation. The teaching and learning process is developed through lectures, text readings, socialized discussion, and literary analysis reports.

STAT 3103: Statistics:

3 credits

The purpose of this course is to familiarize the students with the basic concepts and tools of statistics that allow them to make effective decisions. The course content includes data collection and tabulation, table construction, sampling, measures of central tendency, measures of dispersion, graphs, probability, and others. The student's knowledge is determined through exercises, exams, and research papers. On the review and integration of knowledge and skills for the preparation of the revalidation exam. Techniques and strategies in job search, resume preparation, interview, attitudes, and skills necessary to strengthen personal and professional development and achieve goals; are discussed. The teaching and learning process will be carried out through conferences, socialized discussion, teamwork, and interactive exercises.

SOCI 2015: Principles of Sociology:

3 credits

The purpose of the course is to expose the student to the knowledge and methodologies that define Sociology as scientific knowledge. Through it, the importance of critical analysis in the face of social changes and the implications of these changes in society is highlighted. The course includes conferences, exhibitions or work papers, guided / group discussions, among other strategies such as those related to technological communication media to understand contemporary social reality. This course will be evaluated with exams, homework, among other criteria.

SPAN 1101: Spanish I:

3 credits

The SPAN 1101 course aims for the students to expand the basic skills of oral and written communication. Special attention will be given to the study of the structure of simple grammatical sentences. In addition, some aspects of spelling will be studied: punctuation marks, upper- and lower- case

letters, accentuation, and good use of the vocabulary. The teaching and learning process will be carried out through conferences, socialized discussion, teamwork, and interactive exercises.

SPAN 1102: Spanish II:
3 credits

Pre-requisite: SPAN 1101

The SPAN 1102 course is intended to reaffirm oral and written communication skills. Different texts and fragments of Puerto Rican, Latin American and Spanish literature will be analyzed and discussed: short story, novel, poetry, and essay. The teaching and learning process will be carried out through readings, socialized discussion, oral reports of literary analysis and teamwork.

Allied Health Management

This program is offered at select campuses in Florida. For more information including campuses offering the program and related policies, please visit the catalogs at <https://ftccollege.edu/student-information/#catalog>, <https://online.nuc.edu/en/about-us/policies/#catalog>.

The Bachelor's Degree program in Allied Health Management is comprised of a combination of courses providing skills such as managing the administrative area within a health services organization, medical law/regulations, and current procedural coding with health information resources. The program is designed to prepare a student for a career as an administrator in the health services field.

The Clinical Basic X-Ray concentration track is designed to prepare graduates for Florida Licensure in Basic X-ray Machine Operator.

Students must transfer in credits from allied health diploma or degree program and meet completion requirements. Students must successfully complete **187.5/188** quarter credits in order to qualify for graduation. (See Additional Admissions Requirements and Graduation Requirements sections for more information.)

BACHELOR COURSES

Lower Level Courses

MBC1105	Health Information Resources^^	5.0
MBC1405	Medical Billing and Insurance^^	5.0
MED1055	Medical Office Procedures^^	5.0
MED1060	Anatomy and Physiology with Medical Terminology I^^	6.0
MED1065	Anatomy and Physiology	

	with Medical Terminology II^^	6.0
ACG1100	Accounting I Lecture/Lab^^	4.5
BUS2230	Business Management Lecture/Lab^^	4.5
MKT2010	Introduction to Marketing^^	4.5
ECO202	Microeconomics^^	4.5
Upper Level Courses		
BUS3320	Leadership and Organizational Behavior Lecture/Lab^^	4.5
HSA3300	Health Services Organization Management and Marketing Lecture/Lab^^	4.5
HSA3315	Health Information Systems Lecture/Lab^^	4.5
HSA3320	Healthcare Human Resource Management Lecture/Lab^^	4.5
HSA3325	Introduction to Healthcare Financial Management Lecture/Lab^^	4.5
HSA4405	Healthcare Policy and Law^^	6.0
HSA4415	Population and Health^^	4.5

General Education Courses^^
(6.0 credits X 9) 54.0

General Education Courses (54 Credit Hours Required) The required general education component must include at least one course from each of the following groups: Humanities, Mathematics and the Sciences, and Social Sciences.

4 CONCENTRATION TRACKS (SELECT ONE TRACK)

Concentration Track 1: Medical Coding

MBC1205	Current Procedural Codes/CPT^^	5.0
MBC1305	Diagnostic Coding/ICD-10^^	5.0
MBC2805	Certified Insurance and	

	Coding Exam Prep^^	6.0
MBC2900	Capstone^^	5.0
MBC3000	Advanced CPT/IDC-10 Coding^^	4.5
MBC3100	CPC Exam Prep^^	4.5
HSA400	Leadership in Healthcare^^	6.0
BUS309	Business Ethics^^	6.0
HSA4420	Practice Management Policies, Protocols, & Risk Management^^	5.0
BAD360	Operations Management^^	4.5
HSA4410	Long-Term Managed Care Systems Lecture/Lab^^	4.5

Concentration Track 2: Clinical Basic X-Ray

MBC1205	Current Procedural Codes/CPT^^	5.0
MBC1305	Diagnostic Coding/ICD-10^^	5.0
MED1070	Clinical Procedures*	5.0
MED1075	Laboratory Procedures*	5.0
MED2065	Introduction to Pharmacology*	5.0
MED2075	Basic Cardiorespiratory Procedures*	5.0
MED2805	Certified Medical Assistant Exam Prep^^	6.0
MED3000	Externship^ or MED3005 Medical Assistant Capstone^^	4.0
BBMO2810	Advanced Fundamentals of Basic X-Ray Machine**	5.0
BBMO2805	Fundamentals of Basic X-Ray Machine**	5.0
BBMO2815	Basic X-Ray Machine Operator Exam Prep^^	6.0

Concentration Track 3: Clinical Practice Manager

MBC1205	Current Procedural Codes/CPT^^	5.0
MBC1305	Diagnostic Coding/ICD-10^^	5.0
MED1070	Clinical Procedures*	5.0
MED1075	Laboratory Procedures*	5.0

MED2065	Introduction to Pharmacology*	5.0
MED2075	Basic Cardiorespiratory Procedures*	5.0
MED2805	Certified Medical Assistant Exam Prep^^	6.0
MED3000	Externship^ or MED3005 Medical Assistant Capstone^^	4.0
HSA4410	Long-Term Managed Care Systems Lecture/Lab^^	4.5
HSA4420	Practice Management Policies, Protocols & Risk Management^^	5.0
HSA4425	Certified Physician Practice Manager Exam Prep^^	6.0

Concentration Track 4: Pre-Professional

BUS309	Business Ethics^^	6.0
BAD360	Operations Management^^	4.5
HSA4410	Long-Term Managed Care Systems Lecture/Lab^^	4.5
HSA400	Leadership in Healthcare^^	6.0
ELECTIVE 1	Elective Course	6.0
ELECTIVE 2	Elective Course	6.0
ELECTIVE 3	Elective Course	4.5
ELECTIVE 4	Elective Course	4.5
ELECTIVE 5	Elective Course	4.5
ELECTIVE 6	Elective Course	4.5
ELECTIVE 7	Elective Course	4.5

^^These courses are only available fully online.

Business Office Specialist

This program is offered at select campuses in Florida. For more information including campuses offering the program and related policies, please visit the catalogs at <https://ftccollege.edu/student-information/#catalog>, <https://online.nuc.edu/en/about-us/policies/#catalog>.

The Business Office Specialist diploma program prepares students with the knowledge and necessary skills to perform various business operational functions using computer equipment and software to manage technical administrative tasks in multiple office environments. Students will develop customer service, problem solving, and communication skills to function appropriately in an office environment.

40.5 Quarter Credits / 36 Weeks

CONCENTRATION COURSES

ENT3311	Entrepreneurship Lecture/Lab^^	4.5
BAD100	Introduction to Business^^	4.5
BOS1000	Business Communications & Word Processing^^	4.5
BOS1010	Office Operations & Spreadsheets^^	4.5
BOS1020	Business Communications & Presentations^^	4.5
ACC100	Accounting Basics^^	4.5
MKT2010	Introduction to Marketing^^	4.5
BUS2040	Information Management^^	4.5
HRM200	Human Resources Management^^	4.5

^^This course is only available fully online.

Computer Support Technician

^^This course is only available fully online.

This program is offered at select campuses in Florida. For more information including campuses offering the program and related policies, please visit the catalogs at <https://ftccollege.edu/student-information/#catalog>, <https://online.nuc.edu/en/about-us/policies/#catalog>.

The Computer Support Technician Diploma program prepares students to demonstrate proficiency in providing technical support and assisting users in troubleshooting, performing technical and system diagnostics, and making the necessary repairs. Students will examine computer concepts, information systems, networking, operating systems, computer hardware, software applications and the Internet. They will analyze the principles of customer service and the importance of problem solving and help desk supportive service. Students will develop the skills necessary to obtain an entry-level position in the field and prepare them to take the CompTIA A+ certification.

40.5 Quarter Credits / 36 Weeks

CONCENTRATION COURSES

CAP1001	Introduction to Computer Operations^^	4.5
EEL1101	A+ Hardware, Networking & Mobile Computer Systems^^	4.5
EEL1111	A+ Software, Security & Operating Systems^^	4.5
EEL2090	Routing and Switching^^	4.5
EEL2150	Networking Fundamentals^^	4.5
PRG2100	Windows Professional^^	4.5
PRG2110	Windows Server^^	4.5
CERT200	Preparing for A+ Certification^^	4.5
PRG2120	Windows Network Infrastructure^^	4.5

Medical Billing and Coding Specialist

This program is offered at select campuses in Florida. For more information including campuses offering the program and related policies, please visit the catalogs at <https://ftccollege.edu/student-information/#catalog>, <https://online.nuc.edu/en/about-us/policies/#catalog>.

The Medical Billing and Coding Specialist Diploma Program is designed to prepare students to obtain entry-level positions in the medical billing and coding field through a combination of both clinical and administrative training. Students will learn and practice how to use management software and electronic health records (EHR). They will further become proficient in medical insurance and billing using the ICD-10, CPT, and HCPCS II coding system manuals. The program is focused on preparing students for certification.

48 Quarter Credits / 36 Weeks

CONCENTRATION COURSES

MED1055	Medical Office Procedures^^	5.0
MED1060	Anatomy and Physiology with Medical Terminology I^^	6.0
MED1065	Anatomy and Physiology with Medical Terminology II^^	6.0
MBC1105	Health Information Resources^^	5.0
MBC1205	Current Procedural Codes/CPT^^	5.0
MBC1305	Diagnostic Coding/ICD-10^^	5.0
MBC1405	Medical Billing and Insurance^^	5.0
MBC2805	Certified Insurance and Coding Exam Prep^^	6.0
MBC2900	Capstone^^	5.0

^^These courses are only available fully online.

COURSE DESCRIPTIONS

ACC100 Accounting Basics

4.5 Quarter Credits

In this course, students will examine the fundamentals of bookkeeping and financial accounting. They will also analyze user-friendly examples to increase their knowledge of accounting standards. Furthermore, students will discuss assessment questions regarding corporate governance issues, sustainability, environmental and social reporting procedures, and ethics. Finally, they will evaluate financial statements, ledgers, taxes, capital and revenue expenditure, errors, depreciation, bank reconciliations, and various types of corporations.

ACG1100 Accounting I Lecture/Lab

4.5 Quarter Credits

In this course, students will analyze business transactions in both manual and computerized environments, as well as the vital role of ethics in accounting. Moreover, they will apply accounting terminology, concepts, and the accounting cycle, including the adjusting process, closing process, and preparation of financial statements, in the context of business organizations. In addition, students will examine the nature of internal control for cash and the bank reconciliation process.

BAD100 Introduction to Business

4.5 Quarter Credits

In this course, students will examine the concepts, principles, and operations of business. They will determine the functions of modern business management, marketing, product and brand management, and pricing strategies. In addition, they will analyze the fundamentals of the human resources management side of running a business and the importance of workforce motivation and engagement. Furthermore, they will examine the relationship between

accounting and financial management, as well as the impact of global business.

BAD360 Operations Management

4.5 Quarter Credits

In this course, students will analyze basic concepts, principles, and business operations. They will assess the fundamentals of the human resources management and leadership management aspects of running a business, and the importance of workforce motivation and engagement. Moreover, they will demonstrate their understanding of the functions of management in today's business environment and how this impacts the global economy.

BBM02805 Fundamentals of Basic X-Ray Machine

5.0 Quarter Credits

In this course, students will develop technical knowledge in the fundamentals for the use, maintenance, and storage of x-ray equipment and radiologic film in image production. To this end, they will apply basic mathematics and physics in radiographic procedures. Students will explore the principles of image and film processing, as well as exposure and image quality techniques. They will further practice computed radiography (CR) and digital radiography (DR) systems, among other skills that employers look for in today's healthcare industry.

BBM02810 Advanced Fundamentals of Basic X-Ray Machine

5.0 Quarter Credits

In this course, students will evaluate advanced concepts of x-ray procedures, image production, and x-ray evaluation. They will examine transferring and positioning techniques, as well as relevant anatomy for radiological studies of the upper and lower extremities, skull, and torso, with an emphasis on radiobiology in evaluation procedures, diagnosis and medical

laboratory skills to perform bone densitometry.

BBMO2815 Basic X-Ray Machine Operator Exam Prep

6.0 Quarter Credits

In this course, students will analyze fundamentals physics concepts including X-ray characteristics and functions. They will also evaluate the latest digital imaging processing systems, computed radiography (CR), and digital radiography. Students will investigate the minor health hazards associated with radiation for patients and basic machine operators. Additionally, they will explore topics covered in the Florida Health and the American Registry of Radiologic Technologists (ARRT) certification for Basic X-ray machine Operator (BMO), such as patient care, safety, image preparation, and procedures.

Prerequisites: BBMO2805, BBMO2810

BOS1000 Business Communications & Word Processing

4.5 Quarter Credits

In this course, students will examine the seven Cs of effective business communication. They will evaluate the features and tools available in Microsoft Word for the preparation of business documents. Additionally, students will design business documents in Microsoft Word based on the needs or requirements of different business environments. Furthermore, students will practice acquired skills in preparation for the Microsoft Office Specialist: Word Associate Certification Exam (MOS).

BOS1010 Office Operations & Spreadsheets

4.5 Quarter Credits

In this course, students will explore the functions and tools of Microsoft Excel for data organization, analysis, and presentation. They will analyze workbook structuring, worksheet management, and

data organization for informed decision-making and problem-solving. Furthermore, students will apply formatting techniques, formulas, charts, and automation tools for data visualization enhancement and workflow efficiency. Additionally, students will prepare for the Microsoft Office Specialist: Excel Associate Certification exam.

BOS1020 Business Communications & Presentations

4.5 Quarter Credits

In this course, students will examine the best PowerPoint practices for planning, designing, and evaluating professional presentations in a business environment. Students will also develop a PowerPoint presentation with advanced tools, such as animation effects, hyperlinks, charts, tables, SmartArt graphics, and 3D models. Moreover, they will evaluate views, handouts, and notes as they relate to delivering a presentation in front of an audience. In addition, students will prepare for the Microsoft Office Specialist: PowerPoint Associate Certification Exam.

BUS2040 Information Management

4.5 Quarter Credits

In this course, students will analyze the role and function of the information systems (IS) department in business and society. They will examine information systems for business processes, including tools and technology for the improvement of the decision-making process as well as the collection, organization, and analysis of data. In addition, students will apply strategic planning and project management through new technology, artificial intelligence, and expert systems that impact the future of business.

BUS2230 Business Management Lecture/Lab

4.5 Quarter Credits

In this course, students will examine the types of global economic systems and how

economic performance is measured. They will analyze the forms of business ownership with their advantages and disadvantages, as well as their organizational structure. They will explain human resource management activities, including employee motivation techniques, diversity, and marketing strategies. In addition, they will utilize management information systems, accounting information, financial statements, and social media in business.

BUS309 Business Ethics

6.0 Quarter Credits

In this course, students will examine the importance of ethics in a business context. Moreover, they will explore ethical issues and dilemmas emerging in business today. Also, students will analyze the ethical decision-making process, and the influence of an individual's perceptions, values, and backgrounds. Furthermore, they will value the development, management, and implementation of an organizational ethics program in compliance with the applicable norms.

BUS3320 Leadership and Organizational Behavior Lecture/Lab

4.5 Quarter Credits

In this course, students will analyze the general perspective of organizational behavior and the dynamic environment of organizations. They will examine behaviors in an organizational context based on personalities and characteristics. Also, students will investigate the development processes of groups and teams for effective performance. In addition, they will distinguish the influence of leadership on employee behavior and administrative or organizational effectiveness.

CAP1001 Introduction to Computer Operations

4.5 Quarter Credits

In this course, students will identify computer terminologies, computer

hardware, operating systems, and applications such as Windows and Microsoft Office 365. They will examine software applications such as Word, Excel, Outlook, and PowerPoint, and their basic tasks in personal and work environments. In addition, they will apply knowledge of word processors, search engines, spreadsheets, and graphics to PowerPoint presentations.

CERT200 Preparing for A+ Certification

4.5 Quarter Credits

In this course, students will develop technical skills and knowledge on how to administer, maintain, and operate different computer information systems. They will learn to evaluate different computer system components in order to modify and assemble them based on industry standards and business requirements. Students will use simulation tools to assess and modify computer system configuration to improve the system security functionality. This course will enhance students' knowledge of computer information systems and prepare them to challenge the CompTIA A+ Certification.

Prerequisites: EEL1101, EEL1111

ECO202 Microeconomics

4.5 Quarter Credits

In this course, students will construct a dynamic and coherent framework in which to organize economic phenomena through the lens of microeconomics. They will explain a variety of economic models to hypothesize and understand a wide range of economic and seemingly non-economic phenomena. Additionally, students will interpret microeconomic theory to gain a fundamental understanding of how human behavior, preferences, and decision-making processes influence economic settings.

EEL1101 A+ Hardware, Networking & Mobile Computer Systems

4.5 Quarter Credits

In this course, students will analyze the hardware of a personal computer, particularly its components, protocols, and functions. Additionally, they will distinguish storage systems, power supplies, and I/O devices. Students will also compare local network configuration processes. Furthermore, they will examine mobile device types, printer configurations, and virtualization architecture.

EEL1111 A+ Software, Security & Operating Systems

4.5 Quarter Credits

In this course, students will examine common computer configurations, operating systems, and customer support skills. In addition, they will compare personal computer troubleshooting techniques. Students will also discuss computer system security strategies. Furthermore, they will analyze mobile devices, multiuser operating systems, and scripting technologies.

EEL2090 Routing and Switching

4.5 Quarter Credits

In this course, students will analyze the components used in a local-area network (LAN), WideArea Networks (WANs), and IP routings. They will also examine access control lists (ACLs), routing protocols, local-area network and wide-area network (WAN) design, switching, virtual local-area networks (VLANs), and internet protocols for the effectiveness of network connections such as IPv4 addressing, IPv4 routing, and Open Shortest Path First (OSPF). In addition, students will develop the skills required for the implementation and configuration of network devices. This course includes simulators.

EEL2150 Networking Fundamentals

4.5 Quarter Credits

In this course, students will explore the fundamentals of networking. They will analyze networking models, network security, troubleshooting techniques, transmission methodologies and technologies, and routing protocols. Additionally, they will apply network operation procedures according to specific needs.

ENT3311 Entrepreneurship Lecture/Lab

4.5 Quarter Credits

In this course, students will assess the fundamentals of entrepreneurship and the key attributes of entrepreneurial thinking. They will analyze business opportunities, the elements of a business plan, and the components of marketing. Additionally, students will evaluate options for raising capital and key performance indicators derived from financial statements. Moreover, students will develop the necessary knowledge and entrepreneurial thinking skills for business.

HRM200 Human Resources Management

4.5 Quarter Credits

This course serves as an introductory course in human resources management (HRM) with a particular emphasis on the disciplines used by business professionals. Using the Employee Life Cycle as a framework, the class will explore the historical evolution and philosophical foundations of the field as well as examine the current practices that are being used to support human resources in the workplace. Future HRM challenges will be examined and the emerging concept of strategic HRM will be highlighted.

HSA400 Leadership in Healthcare

6.0 Quarter Credits

In this course, students will analyze the foundations of leadership within the context

of healthcare, including various types of theories and styles. They will also explore leadership and followership in the solution of organizational challenges. In addition, students will evaluate leadership skills applicable to organizational management in healthcare.

HSA3300 Health Services Organization Management and Marketing
Lecture/Lab

4.5 Quarter Credits

In this course, students will analyze foundational aspects of healthcare organizations. They will examine specific areas, including organizational development, legal and ethical principles, and management oversight. They will also evaluate healthcare professionals' performance, teambuilding, communication, healthcare costs, and the implementation of healthcare technology.

HSA3315 Health Information Systems
Lecture/Lab

4.5 Quarter Credits

In this course, students will examine the general principles of finance as they relate to health care organizations; these include sources of revenue for various health care entities, fundamentals of finance for health care organizations, principles of accounting, interpretations of ratios using industry-wide comparisons, balance sheet and income statement preparation and analysis, budget analysis and cost control measures, cash flow, and financial reporting. They will also analyze issues surrounding budgeting dynamics that alter financial conditions.

HSA3320 Healthcare Human Resource Management Lecture/Lab

4.5 Quarter Credits

This course introduces contemporary healthcare human resource management issues within the U.S. Healthcare system. Contrasts the differences between personnel administration and elements of strategic human resource management. Students

learn key concepts such as; line vs. staff relationships, the manager/employee relationship, job design, job analysis, position descriptions, recruitment, retention, promotion, succession planning, legal issues, safety issues, labor relations, training, compensation, benefits, and performance appraisals. Current trends in healthcare human resource management are covered.

HSA3325 Introduction to Healthcare Financial Management Lecture/Lab

4.5 Quarter Credits

In this course, students will examine the general finance principles regarding healthcare organizations, including revenue sources, accounting fundamentals, financial statements, and cost control strategies. Additionally, they will analyze budgeting dynamics and their effects on financial conditions and decision-making. Furthermore, students will assess the impact of financial principles on the sustainability and efficiency of healthcare organizations.

Prerequisite: MAT1010

HSA4405 Healthcare Policy and Law
6.0 Quarter Credits

In this course, students will analyze healthcare policy, regulation, and law. They will also review sources of common, statutory, and constitutional law; contracts; and intentional torts. In addition, students will discuss the organization and management of corporate, for-profit, and nonprofit healthcare organizations (HCOs). Furthermore, they will assess liability issues for individuals and HCOs, admission and discharge issues emergency care issues, consent treatment consent issues, taxation issues, and antitrust issues. Moreover, students will examine medical staff appointments and privileges. Finally, they will evaluate fraud, abuse, and corporate compliance programs.

HSA4410 Long-Term Managed Care Systems Lecture/Lab

4.5 Quarter Credits

In this course, students will assess the role of health care management, understanding the structure, staffing, and organizational leadership needed in the long-term care environment. They will analyze medical terminology to understand caregiver responsibilities, including communication, administration, and restoration of residents. They will examine essential needs, medical conditions, and disabilities, as well as the application of concepts and protocols to laboratory exercises. Students will also understand how to provide care for diverse residents.

HSA4415 Population and Health Issues Lecture/Lab

4.5 Quarter Credits

In this course, students will examine the historical influence of environmental, socioeconomic, and behavioral determinants on community health and quality of life. They will relate current public health issues to the accessibility and effectiveness of government and community-based resources, lifestyle choices, and health services. Students will also employ management strategies aimed at strengthening public health preparedness for disasters, emergencies, and policy changes.

HSA4420 Practice Management Policies, Protocols & Risk Management

5.0 Quarter Credits

In this course, students will examine the general principles of finance as they relate to health care organizations; these include sources of revenue for various health care entities, fundamentals of finance for health care organizations, principles of accounting, interpretations of ratios using industry-wide comparisons, balance sheet and income statement preparation and analysis, budget analysis and cost control measures, cash flow, and financial reporting. They will also

analyze issues surrounding budgeting dynamics that alter financial conditions.

HSA4425 Certified Physician Practice Manager Exam Prep

6.0 Quarter Credits

In this course, students will review the management of multiple processes affecting the institution and the patients including revenue cycle, compliance regulations, human resources, health information, and policy and law as presented in previous courses. They will demonstrate the acquired skills in preparation to challenge the Physician Practice Management Certification.

MBC1105 Health Information Resources

5.0 Quarter Credits

In this course, students will explore the fundamental administrative functions of electronic health records (EHR) and their role in healthcare operations. They will examine EHR systems, protected health information (PHI), and financial processes, and their impact on healthcare efficiency and compliance. Furthermore, students will apply database management and data entry skills in electronic record processes and maintenance.

MBC1205 Current Procedural Codes/CPT

5.0 Quarter Credits

In this course, students will analyze the rules and guidelines of the Current Procedural Terminology (CPT) and the Healthcare Common Procedure Coding System (HCPCS) Level II coding manuals. They will also assess the benefits of using coding manuals for those working in the medical field as a medical biller, coder, collector, or office administrator. Additionally, students will evaluate coding procedures and services following CPT and HCPCS Level II coding manuals and encoder software.

MBC1305 Diagnostic Coding/ICD-10
5.0 Quarter Credits

In this course, students will examine chapter-specific guidelines and basic diagnostic conventions of the International Classification of Diseases, Tenth Edition, Clinical Modification (ICD-10-CM). They will also apply diagnostic codes to medical scenarios according to ICD-10-CM guidelines.

Prerequisite: MED1065

MBC1405 Medical Billing and Insurance

5.0 Quarter Credits

In this course, students will examine the revenue cycle management (RCM) procedures in relation to the billing and coding of medical services. Additionally, they will analyze the different types of insurance programs, governmental and private third-party payers, workers' compensation packages, and disability coverage.

MBC2805 Certified Insurance and Coding Exam Prep

6.0 Quarter Credits

In this course, students will interpret coding procedure principles covered throughout the medical billing and coding program courses, including those related to medical terminology, insurance, and documentation compliance. They will also demonstrate the skills acquired for NCCT certification in insurance and coding through extensive practice exercises.

Prerequisite: All previous program courses

MBC2900 Capstone

5.0 Quarter Credits

In this course, students will demonstrate knowledge, skills, and abilities related to office insurance finances, the revenue cycle, managed care issues, the collections process, and insurance claims in medical coding and billing. In addition, they will determine codes used in encoder software for diagnoses, procedures, and services.

Prerequisite: All previous program courses except MBC2805

MBC3000 Advanced CPT/ICD-10 Coding

4.5 Quarter Credits

In this course, students will use coding references to assign proper diagnosis and procedural codes in order to document medical necessity for proper third-party reimbursement in the revenue cycle. Concurrently, they will dissect the process of evaluating medical documentation to recognize relevant data and the importance of following guidelines for proper coding. Students will also practice how to use an electronic encoder system for real world cases in surgical and non-surgical environments.

Prerequisite(s): MBC1205, MBC1305

MBC3100 CPC Exam Prep

4.5 Quarter Credits

In this course, students will use knowledge of CPT®, ICD-10-CM, and HCPCS Level II coding systems in preparation for the national coding certification exam from the American Academy of Professional Coders. They will employ medical terminology, anatomy, and standard coding guidelines for diagnostic and procedural codes across a variety of clinical case scenarios. Additionally, they will analyze ethical responsibilities, coding challenges, and compliance with professional coding practices for the successful completion of the Certified Professional Coder (CPC) exam.

Prerequisite: MBC3000

MED1055 Medical Office Procedures

5.0 Quarter Credits

In this course, students will examine skills related to administrative procedures of the medical office, such as the use of electronic health records (EHR), appointment scheduling, filing, handling mail, and preparing office budgets. They will also analyze stress management strategies and

the importance of workplace ethics, privacy laws (HIPAA), and effective communication in diverse environments. Furthermore, students will identify changes and challenges in the 21st century workplace and the role of the administrative professional within that setting.

MED1060 Anatomy and Physiology with Medical Terminology I

6.0 Quarter Credits

In this course, students will explore the organization of the human body and the relationship between structure, function, and homeostasis of the integumentary, the musculoskeletal, and the nervous system, including special senses. They will also dissect the meaning of medical terms and abbreviations according to their basic components—prefixes, suffixes, and roots—in addition to special numerical, positional, and condition-related components..

MED1065 Anatomy and Physiology with Medical Terminology II

6.0 Quarter Credits

In this course, students will analyze concepts related to the anatomy and physiology of the cardiovascular, lymphatic, endocrine, reproductive, digestive, and urinary systems of the human body. They will examine medical terminology related to the cardiovascular, lymphatic, endocrine, reproductive, digestive, and urinary systems of the human body. Furthermore, students will determine the etiology, diagnosis, and treatment of diseases affecting the cardiovascular, lymphatic, endocrine, reproductive, digestive, and urinary systems.

MED1070 Clinical Procedures

5.0 Quarter Credits

In this course, students will analyze practical clinical skills for working in a medical office environment. They will explore patient education and medical history, focusing on effective communication skills. Furthermore, students will assist healthcare staff in taking

patients' vital signs, physical examinations, and various treatment modalities.

Prerequisites: MED1060, MED1065

MED1075 Laboratory Procedures

5.0 Quarter Credits

In this course, students will evaluate specimen collection methods. They will perform laboratory procedures and CLIA-waived tests according to sanitation standards, with a focus on effective communication with patients. Students will also explore automated laboratory testing techniques. Furthermore, students will practice acquired skills by completing practical lab exercises in preparation for the certification test.

Prerequisites: MED1060, MED1065

MED2065 Introduction to Pharmacology

5.0 Quarter Credits

In this course, students will analyze the basic rules of preparation and administration of oral and parenteral medications. They will examine the parts of a prescription as well as commonly prescribed medications, how they affect the body, and why they are prescribed. They will demonstrate preparation and administration of medications through various techniques, including intramuscular, subcutaneous, intradermal, and Z-track injections. Furthermore, they will evaluate the Occupational Safety and Health Administration (OSHA) guidelines in preparation for the OSHA bloodborne pathogen certification.

Prerequisites: MED1060, MED1065

MED2075 Basic Cardiorespiratory Procedures

5.0 Quarter Credits

In this course, students will analyze commonly-performed cardiovascular and pulmonary function studies. They will identify life threatening signs of arrhythmia, as well as the daily functions and responsibilities of a medical assistant technician. They will also

perform cardiorespiratory procedures such as a 12-lead electrocardiogram without artifacts as well as first AID procedures. They will practice acquired skills by completing lab exercises in preparation for the NCMA certification test.

Prerequisites: MED1060, MED1065

MED2805 Certified Medical Assistant Exam Prep

6.0 Quarter Credits

In this course, students will reinforce their knowledge of the topics and practical skills covered throughout the Medical Assistant Technician program in anticipation of enrolling in the capstone course and applying for the medical assistant certification examination. They will evaluate medical assistant administrative and exam room tasks, the electronic health record (EHR) system, and the information required to complete the medical records. In addition, students will analyze the influence of nutrition in a patient's health and the importance of pharmacology concepts and procedures. They will also examine basic cardiology, phlebotomy, and laboratory procedures. They will practice acquired skills by completing lab exercises in preparation for the certification test.

Prerequisites: MED1055, MED1060, MED1065, MED1070, MED1075, MED2065, MED2075

MED3000 Externship

4.0 Quarter Credits

In this course, students will apply administrative and clinical skills obtained throughout the Medical Assistant program at an approved externship site. Students will also gain hands-on experience in healthcare settings, where they will work under the direct supervision of a clinical professional. Furthermore, they will demonstrate their clinical skills while working with patients, doctors, and other members of the healthcare team.

Prerequisite: Prerequisite: All previous courses with a minimum CUM GPA of 2.0.

MKT2010 Introduction to Marketing

4.5 Quarter Credits

In this course, students will analyze essential marketing concepts for long-term success in business settings. They will also examine the basic marketing challenges, trends, and approaches in today's multicultural, generational, and diverse workforce environment. In addition, students will evaluate the main elements and methods in decision-making for brands and advertising, as well as the fundamental aspects of ethics and social responsibility.

PRG2100 Windows Professional

4.5 Quarter Credits

In this course, students will analyze the functions and features involved in the configuration and maintenance of operating systems. They will evaluate methods for the implementation, management, and troubleshooting of hardware devices, network protocols, and security measures. Additionally, students will demonstrate their skills in the monitoring and optimization of system performance, as well as in the configuration and troubleshooting of issues related to system reliability.

PRG2110 Windows Server

4.5 Quarter Credits

In this course, students will analyze the use of Windows Server 2022 across diverse environments, such as data center, cloud, virtualized, container-based, and hybrid configurations. Additionally, students will manage server deployment and configuration, storage solutions, and performance troubleshooting with enhanced monitoring tools. They will examine modern Windows Server technologies and network services, with a focus on Active Directory, Certificate Services, DNS, DHCP, WSUS, IIS, file sharing, printing, remote access, and

advanced security features for improved system resilience and protection.

Prerequisite: PRG2100

PRG2120 Windows Network

Infrastructure

4.5 Quarter Credits

In this course, students will analyze the Windows Server services in different scenarios, including data centers and cloud environments depending on virtualization and containers. They will discuss the Active Directory Infrastructure. Also, they will control various types of user accessibility to resources in a network. Additionally, they will explore the Windows Updates technology.