Schedule of Classes

Summer 2013 – Session begins June 2013 – suagm.edu/une
# Table of Contents

COLLEGE INFORMATION ................................................................. 3
DIRECTORY ......................................................................................... 6
TRANSITORY STUDENTS ................................................................. 7
COURSE DESCRIPTIONS .................................................................. 8
INTERNATIONAL SCHOOL OF HOSPITALITY AND CULINARY ARTS .............. 8
    Culinary ....................................................................................... 8
    Hotel Management ..................................................................... 8
SCHOOL OF SOCIAL AND HUMAN SCIENCES ........................................... 10
    Communications ....................................................................... 10
    Psychology .................................................................................. 11
    Social Sciences ......................................................................... 11
    Arts .............................................................................................. 12
    Social Work ............................................................................... 12
    Sociology .................................................................................... 13
    Languages ................................................................................... 14
INTERNATIONAL BUSINESS SCHOOL .................................................. 15
    Accounting ................................................................................. 15
    Management ............................................................................. 16
    Finance ....................................................................................... 17
    Marketing .................................................................................... 17
    Statistics ..................................................................................... 17
SCHOOL OF SCIENCE AND TECHNOLOGY .............................................. 18
    Biology ......................................................................................... 18
    Chemistry .................................................................................... 19
    Physics ........................................................................................ 20
    Mathematics ................................................................................ 20
SCHOOL OF HEALTH SCIENCES ............................................................ 21
    Health Sciences ......................................................................... 21
    Psychology ............................................................................... 22
    Public Health ............................................................................. 22
Universidad del Este (UNE) – Puerto Rico

Institutional Profile

The Universidad Del Este (UNE) is a private non-profit institution of higher education and a member of the Ana G. Méndez University System in Puerto Rico. Its main campus is located in Carolina and its five University Centers are in the municipalities of Yauco, Utuado, Cabo Rojo, Manatí, and Santa Isabel. In the mainland, it has four Branch Campuses: Metro Orlando Campus, South Florida Campus, and Tampa Bay Campus in Florida and the Capital Area Campus in Maryland.

The Carolina campus in Puerto Rico is within easy reach of the entire Eastern part of the island. Its 21 acres suburban campus and its modern and spacious buildings provide an ideal atmosphere for the learning experience. As a professionally oriented institution, Universidad Del Este offers thirty baccalaureate programs, twenty five associate degrees, as well as twelve master’s degree programs in the following areas; business, education, liberal arts, hospitality management, and sciences. Founded in 1949, as Puerto Rico Junior College, it has continued to grow into a four-year institution in 1992 and finally evolving into a university in 2001.

The student population consists mostly of commuting young adults from the surrounding communities. The 13,783 student body is comprised of undergraduates in the Carolina campus and its five additional locations. The graduate programs initiated in October 2001 with an enrollment of 25 students and as of the first semester of 2008-09, the student body has increased to over 1,136 students registered in the four graduate programs offered at the Carolina campus.

The academic staff consists of more than seventy-nine (79) full time faculty and two hundred and thirty -five part-time professors. A little over 23% of the full time faculty has a doctorate degree and the rest of the faculty holds master’s degrees in their fields of expertise.

Mission Statement

The mission of the Universidad Del Este is to promote the integral development of a diverse student population through research, critical-creative thinking, the construction of knowledge, and its application. Academic offerings include certification, associate degrees, bachelor degrees, graduate studies, and continuing education programs. These offerings meet the needs and interests of the members of the university community and receive the support of all institutional resources. Study programs incorporate multidisciplinary educational perspectives through learning and teaching strategies that are in harmony with local, regional, global demands, and with the latest technology.

The learning vision also incorporates a life-long learning process based on the most effective access for gathering, handling, analyzing, and applying information to relevant situations. The institution is committed to continuous improvement of the teaching-learning process, support services, assessment, research, and the appreciation of Puerto Rican culture in harmony with global cultures.
**Principles**
The principles, which guide the Institution, are wisdom, justice, honor and freedom.

**Goals**
To fulfill its mission, Universidad Del Este proposes:

- To develop a well-rounded person through a multidisciplinary and liberal education
- To value diverse manifestations of Puerto Rico’s cultural-historic patrimony in our national identity and within a globalize culture
- To help students enrolled at the institution to achieve their educational goal
- To develop optimum levels in the quality of student life through the broadening of academic support services, team work, the use of emerging technologies and occupational and professional orientation pertinent to a well-rounded education
- To improve quality levels in the teaching, learning and service processes
- To strengthen human resource competencies through personal and professional development activities
- To perform research as a fundamental means to solve problems and as an essential part of institutional duties
- To develop current and pertinent academic courses that respond to society’s needs
- To improve the quality, efficiency, and effectiveness of decision making in institutional administrative procedures
- To demonstrate leadership in services provided to Puerto Rico and abroad

**Administrative Council and Academic Board**

**Administrative Council**
The Administrative Council is the legislative body for institutional policy of the university in accordance with the by-laws of the Ana G. Méndez University System, Inc. as established by its Board of Directors. The Chancellor, the Vice-Chancellor, the Vice-Chancellor of Student Affairs, the Vice-Chancellor of Outreach, the Vice-Chancellor for Information and Telecommunications, the Deans of the Schools, four faculty representatives, and two student representatives, constitute the Administrative Council.

**Academic Board**
The Academic Board regulates all the academic aspects of the Institution. It recommends relevant regulations regarding faculty, curricula, educational projects, and other educational innovations. The Academic Board consists of the Vice-Chancellor, the Associate Deans of the Schools, and the Director of the Library, ten undergraduate faculty representatives, and two student representatives.

**Statement of Accreditation**
The Middle States Association on Higher Education in USA, a regional accrediting agency recognized by the U.S. Department of Education, accredits Universidad Del Este in Puerto Rico. The Middle States Association on Higher Education has extended this accreditation to the Metro Orlando, South Florida, Tampa Bay, and the Capital Area campuses.
Accreditation, Licensing and Professional Associations

**Universidad del Este accreditations and licensing:**
- Middle States Commission on Higher Education (MSCHE)
- Puerto Rico Council on Higher Education (PRCHE)
- Puerto Rico General Council of Education (PRGCE)
- Joint Review Committee on Education in Radiologic Technology (JRCERT)
- International Association for Continuing Education and Training (IACET)
- Accreditation Commission for Programs in Hospitality Administration (ACPHA)
- American Culinary Federation (ACF)
- Accreditation Council for Business Schools and Programs (ACBSP)

**Universidad Del Este is a member in the following professional associations:**
- American Association for Adult and Continuing Education
- American Association for Counseling and Development
- American Association of Collegiate Registrars and Admission Officers
- American Association of Higher Education
- American Council on Education
- American Library Association
- American Management Association
- Association for Educational Communications and Technology
- Association for Supervision and Curriculum Development
- Center for Scientific Research
- College Entrance Examination Board
- Council for Adult Experiential Learning
- Hispanic Association of Colleges and Universities
- Library Administration and Management Association
- National University Continuing Education
- Phi Delta Kappa
- Puerto Rico Association of Higher Education
- Supervisors Labor Relations Program
- The Association for Institutional Research
- The Society for College and University Planning

**Non-Discrimination Statement**
Universidad Del Este does not discriminate based on race, handicap, national or ethnic origin, creed, color, sex, social condition or political, religious, social or trade union beliefs.
DIRECTORY

Alberto Maldonado Ruiz, Chancellor
Tel. (787) 257-7373 Ext. 2000

Mildred Huertas Solá, Vice-Chancellor's Office
Tel. (787) 257-7373 Ext. 2101
ue_mhuertas@suagm.edu

Indraní Fuentes, Summer Program Director
Tel. (787) 257-7373 Ext. 2117
ue_ifuentes@suagm.edu

Magda Ostolaza, Admission and Marketing Associate Vice-Chancellor's Office
Tel. (787) 257-7373 Ext. 3301
ue_mostolaza@suagm.edu

Norberto Pagán, Director of Financial Aid
Tel. (787) 257-7373 Ext. 3401
nopagan@suagm.edu

Elisa Quiles, Registrar
Tel. (787) 257-7373 Ext. 3601
equiles@suagm.edu

Ángel G. González González, Treasurer Director
Tel. (787) 257-7373 Ext. 3501
ue_agonzalez@suagm.edu

Universidad Del Este’s main campus address and telephone numbers are:

Mailing Address: P.O. Box 2010 Carolina, Puerto Rico 00984-2010
Phone: (787) 257-7373
Fax No.: (787) 752-0070
Website: www.suagm.edu/une

Limitations on Summer Catalog Provisions
The educational process necessitates change. This publication must be considered informational and not binding on the university. Each step of the educational process, from admission through graduation, requires appropriate approval by university officials. The university must, therefore, reserve the right to change admission requirements or to refuse to grant credit or a degree if a student does not satisfy the university, in its sole judgment, that he or she has satisfactorily met its requirements. UNE’s Summer Catalog is a document extracted from official catalog of Universidad del Este. For additional information about the programs consult the official catalog of the University at the following hyperlink: http://www.suagm.edu/une/pdf/UNE_Undergraduate_Catalog_2009_2012.pdf
Students who are enrolled in another university or college and wish to take courses not leading to a degree can apply as transitory student. They need an official permit from their university or college.

Requirements for Special and Transitory Students:

- Fill out a Special Student application form.
- Enclose payment of an application fee of $15.00. This fee is non-refundable.
- Applicants with a college degree must enclose a copy of the degree or an official permit authorizing them to enroll.
COURSE DESCRIPTIONS

INTERNATIONAL SCHOOL OF HOSPITALITY AND CULINARY ARTS

Culinary

CHEF 107  Food Preparation II
5 Credits

Introduction to fundamental cooking theories and techniques in food preparation. Application of cooking methods will emphasize on sautéing, poaching, steaming, roasting, braising, baking, broiling and frying. The students will learn cooking techniques used as for fish, meats, poultries, vegetables, soups and starches. Sauce derivatives, breakfast cookery, plate development, knife skills and proper sanitation practices are also applied in this course. Theoretical presentations, demonstrations and extensive participation in lab sessions are used to develop the course. The course will use the Internet as a research tool and MS Words for paper and projects. Pre-requisite CHEF 116, CHEF 104, CHEF 105.

CHEF 200  Baking I
4 Credits

Introduction to the principles and techniques used in the preparation of high-quality baked goods and pastries, with an emphasis on baking principles, fundamental production techniques and evaluation of quality characteristics of baking ingredients. The students will develop an understanding of baking formulas and ratios used to prepare bread and dough. Topics to be covered and practiced include: cake baking and decoration, cookie dough, pie crust and pate a choux. Theoretical presentations, demonstrations and extensive participation in lab sessions are used to develop the course. The course will use the Internet as a research tool and MS Words for paper and projects. Pre-requisite CHEF 107

Hotel Management

HMNG 201  Food & Beverage Management
3 Credits

Overview of the various types of the food & beverage operations in the industry, the different ways to serve food & beverage and the proper ways to deal with the customers and their complaints. The students should understand the infrastructure of the front and back of the house of a restaurant, the different ways of setting the tables and services. Fundamental of administration, marketing and sales, cost control, food production, nutrition, financial and customer service will be explored. Theoretical presentations, case studies and demonstrations will be used to develop the class. The course will use the Internet as a research tool, MS Words for paper and projects and emails as means of communication. Pre-requisite: MATH 120/130
HMNG 207  Basic Wines, Beers and Spirits
3 Credits

This course explores the history, classification, methods of production and uses of wines, beers, and spirits. Sensory analysis, product knowledge, basic principles of food and wine pairing, service techniques and alcohol service related to the hospitality industry will be discussed. The course will use the Internet among other research tools, e-mail as means of communication and MS Word and Power Point for papers and projects. Pre-requisite: None

HMNG 211  Hospitality Ethics
2 Credits

Debates of the ethical dilemmas commonly encounter by the hospitality employees. Discussion of overbooking regulations, breach of contract, sexual harassment, professional and personal relationships with peers and supervisors, abuse of power, schedule assignation and lies. Emphasis will be placed in the understanding of morale and its implication. The course will be developing through the analysis of case studies, readings, and day-today situations. The course will finalize with the development of a Code of Ethics. It will use the Internet among others research tools, Email as means of communication and MS Word for papers. Pre-requisite: None

HMNG 280  Guest Services
3 Credits

The exploration of the role of service in a successful hospitality operation. Topics discussed encompass: handling difficult guests, dealing with complaints, developing listening skills, and improving guest satisfaction. Introduction to the service philosophy. The course will use the Internet among others research tools, Email as means of communication and MS Word and Power Point for papers and projects. Pre-requisite: HMNG 101

HMNG 290  Spreadsheets and Database Applications
3 Credits

Introduction to tourism business related computerized software applications including spreadsheet, database, presentation and graphics packages. Students will learn how to use the software (Excel, Access, Word, and Power Point) to organize, interpret and present information. The course uses real life situations to prepare and analyze financial information using Excel. Special emphasis is placed on database management and the use of MS Access to create tables, queries and reports of information.

HMNG 347  Hospitality Human Resources Management
3 Credits

Comprehensive study of human resources, personnel supervision and effective communication as applied to Human Resources Management techniques within hotels, restaurants, events and other hospitality workplaces will be presented. The role, characteristics and skills of a supervisor and the principles of planning, recruitment, selection, staffing and organizing, training, performance management, coaching, counseling and discipline, controlling, delegation and decision making are topics of study. Other topics will include how to resolve conflicts, organizational behavior theories
applied to the strategic management of a successful hospitality operation, important behavioral modification factors such as management styles, motivation, job satisfaction, employee empowerment, organizational culture, leadership, team-work, power structure and organizational change, will be discussed and analyzed. The course will use the Internet as a research tool, the Email as a means of communications and MS Word for papers and projects. Pre-requisite: HMNG 101, 211, 280

SCHOOL OF SOCIAL AND HUMAN SCIENCES

Communications

COMM 101
3 Credits
Theory of Communication

Study and analysis of the processes, concepts and importance of communication from the point of view of the main humanistic and scientific theories as well as its historic and philosophical foundations. Includes definitions and models of communication, the use of language, motivation, persuasion, response and the factors that are part of communication processes. The course is developed through discussion of theories, critical analysis of situations, simulations, readings, research, and the responsible use of technology. It is offered in eight-week sessions.

COMM 102
3 Credits
Introduction to Mass Media

Panoramic study of the mass media. Includes historical development, organization, structure, characteristics, and analysis of social responsibility, as well as, the impact that media has over the public. The course is developed through discussions, critical analysis, readings, case analysis, presentations and the responsible use of technology. It is offered one semester.

COMM 210
3 Credits
Digital Photography

This is a laboratory-intensive course that emphasizes communication technology, digital photography and its tools, techniques and modalities. Through class discussions and work in the laboratory the student will recognize technologies such as black-and-white photography, color photography, computers, satellite, telephone and Internet transmissions, and will work on photography projects from the development of a concept to final product. The course will entail two 2-hour weekly meetings at the digital media laboratory. It will be offered in a semester.

COMM 310
3 Credits
Communication Research

Analysis and application of the basic processes, methods and techniques commonly in use within the field of communications. The course explores problem definition and hypothesis development, research design, from both quantitative and qualitative perspectives, data collection and analysis in traditional settings and in cyberspace. The course is taught through the development of research projects, presentations and responsible use of technology.
COMM 400  Law and Ethic in Communications
3 Credits

Study of the laws, jurisprudence, and regulations regarding media and analysis of the state and federal jurisdictions as they apply to the immediate context. Emphasis is placed on the values, ethical and moral principles, and their application to the communications field from the individual and the business standpoints. The course also includes discussion of copyright, privacy, slander, defamation, speech rights, obscenity, pornography, and freedom of information. The course is carried out through the use of case analysis, readings, research, presentations, and the responsible use of technology. It is offered in one semester.

Psychology

PSYC 121  General Psychology I
3 Credits

This course is an introduction to the scientific study of the fundamental principles that govern the human conduct. The concepts and principles related to the development of psychology as a science, the function of the nervous system, endocrine system, sensorial, and motor systems, perception, learning and intelligence. The basics theories and their relation with individual and social environments.

PSYC 122  General Psychology II
3 Credits

The course is an introduction to the scientific study of the fundamental principles that rule human behavior. Concepts and principles related to the development and maturity, such as impulses, motivation feelings and emotions, frustrations and conflicts, abnormal and normal, etc. will be studied. Also, basic relations and their relationship with the individual and society will be included.

PSYC 226  Evolution Psychology
3 Credits

Study of human development since its conception to death. Study of the theories of learning, cognitive in the development and psychodynamic. Emphasis on the interpersonal processes, cognitive and motivations. It makes reference to the findings in the scientific investigation of the study of human development.

Social Sciences

SOCI 203  Principles of Sociology
3 Credits

This course will study the individual and his relationship with his environment and social organizations, and the nature of this relationship. The course will also emphasize the development, functions and influences of interaction, changes and social processes.
SOCI 216  
Contemporary Social Problems  
3 Credits

Critical, theoretical, and empirical examination from the sociological perspective of the social problems, their classification of deviant behavior and the subsequent informal and formal social control. The course includes the influence of the social communication media and the structures in the construction of social problems. Comparative analysis of these local and global problems, their possible solutions by means of citizen actions and by the governmental structures that generate public policy destined to attend to and extenuate them. Analysis of readings and simulation

SOCI 335  
Ethics, Morality and Society  
3 Credits

Scientific and philosophical analysis of the classic and modern axioms related to ethics, morality, and individual and collective human behavior. The course is also the study of the ethical and moral foundations of society with special attention to the relation between the individual and his/her personal codes of conduct when faced with those held by the community. Emphasis is on the analysis of ethical, moral, and self-concepts, as well as how they are modeled, internalized, and impact the vision of a responsible life in society, education, economy, religion, government, and professions; appreciation for the diversity of values within the perspective of a global society. The course will be developed through the study of theoretical contributions and their application to real and hypothetical situations and problems, teamwork, discussion groups, reflections, ethnographic research, and use of the Internet. Responsible use of technology will be encouraged.

Arts

ART 101  
Plastic Art Appreciation  
3 Credits

This course is designed to develop in the student a broad understanding of the basic principles of art. Study includes the elements of art, with special emphasis on plastic arts. The student will also gain aesthetic appreciation of great masterpieces.

Social Work

SOWO 322  
Social Work with Groups and Communities  
3 Credits

This course develops the students’ capacity to understand the diverse social roles that exist in groups and how they impact the community. Special attention will be given to the leader’s role within the group as well as the different leadership styles. Discussion of different strategies that can be used to solve the various problems that can arise when working with small groups and community settings.
# Sociology

**SOSC 112**  
**The Human Social Environment**  
3 Credits  
This course studies the conceptual and critical analysis of human social environment focusing on the main theoretical approaches and social organization, the integration of social and cultural structures, the social norms and roles, social inequality, and deviant behavior, as well as, the social institutions and their functions. The study of social processes, social interaction, and socialization and their consequences for the individual will be emphasized.

**SOSC 228**  
**Interpersonal Relations**  
3 Credits  
Philosophical and theoretical study of human and interpersonal relations from the behavioral perspective. Critical analysis and evaluation of human conduct starting with the individual and ending with his/her relationships with others. Emphasis will be on motivational skills, conflict management, decision making, problem solving, and ethical reflections, among others. The course will be carried out through case analysis, research, reflective exercises, group dynamics, and team work.

**SOSC 230**  
**Political & Economic Systems**  
3 Credits  
Study of the theories and concepts of the political and economic systems of the past, present, and future. Analysis of the challenges that formal governments face and their interaction with a global political and economic system. Emphasis is placed on economic policies, political culture, and the institutionalization and application of these to the political environment of a country. The course is developed through research, case studies, analysis of political and economic cases and processes, and their application.

**SOSC 250**  
**Statistics in Social Sciences**  
3 Credits  
An introduction to the statistical methodology as applied to Social Sciences. Basic statistical concepts and techniques are introduced. Emphasizes the scientific and graphical presentation of data, as well as its analysis.

**SOSC 258**  
**Research Techniques in Social Sciences**  
3 Credits  
Introduces the learner to the application of all scientific techniques for research and investigation in the social sciences. Places emphasis on basic procedures for gathering data, establishing the problem and hypothesis, analyzing, interpreting and applying findings. Prerequisites: SOSC 250
SPAN 115  Reading, Writing, and Oral Communication in Spanish I
3 Credits

Comprehension and use of the Spanish language from a communicative approach. The study and analysis of the written text taking into consideration the aspects of comprehension and the reading process. Analysis and interpretation of readings using the following as a reference frame: vocabulary in context, main idea, secondary idea, relationship of ideas, types of discourse, and types of language. Construction of the written message from the sentence to the paragraph. Development of techniques for oral presentations integrating technology in an expository discourse. The course will be conducted with the use of reflections, discussions of readings, critiques, investigations, the writing of essays and oral presentations with the use of technology. Includes laboratory experience.

SPAN 116  Reading, Writing, and Oral Communication in Spanish II
3 Credits

The study and analysis of the written text taking into consideration the aspect of comprehension and the reading process. Analysis and interpretation of reading using the following as a reference frame: evaluation of the content of the message (inferences, critical analysis, distinguish amongst facts, opinion, and assumptions). To go beyond the meaning of the text and author’s techniques, and resources. Construction of the written message from the paragraph and sequence of paragraphs for coherence of the message. Development of techniques for oral presentations for an argumentative discourse. The course will be conducted with the use of reflections, discussions of readings, critiques, investigations, the writing of essays and oral presentations with the use of technology.

ENGL 115  College Reading and Writing I
3 Credits

Emphasis in strengthening of basic reading comprehension and writing skills. An integrated language arts approach will be used; therefore, specific grammatical skills will also be developed along with oral communication and listening skills. The ability to organize one’s thoughts, to express them simply and clearly, and to observe the standard and conventions of language usage will be developed. Short research projects will be developed through the integration of technology (individual, pair, or group work). Includes lab experiences.

ENGL 116  College Reading and Writing II
3 Credits

Strengthening of the student’s reading comprehension and composition skills. Emphasis on strategies for generating ideas for writing, planning, and organizing material, intended to prepare students for the demand of college writing, focusing on reading critically and incorporating source material in student’s own writing. Research projects will be developed through the responsible use of technology by pair or group work. Includes lab experiences.
ENGL 230  Introduction to Literary Genres  
3 Credits

Introduction to literature through the study of the different literary genres. Emphasis is placed on reading and analysis of an extensive variety of authors and types of literature. Intensive reading course. Provides for response writing and discussion as teaching and learning techniques. Research projects will be developed through the responsible use of technology.

ENGL 234  Advanced Conversational English  
3 Credits

Extensive practice in the use of academic speaking, listening, communication skills. The course prepares students to master successful communication skills in everyday settings such as the workplace, social events, and problem solving situations. Conversations, role-playing, discussions, and debates, among others, will be used in the classroom. Technology will be integrated to facilitate the development of the activities.

ENGL 307  Professional Writing  
3 Credits

Advanced expository writing for professional and technical venues, including research writing skills and composition using computer media. This course focuses on “real world” writing that emerges from social and personal civic commitments. Analysis of strengths and weaknesses of text and crucial features of major professional writing documents with the use of checklists and rubrics are discussed. Course requires extensive writing practice and portfolio presentation.

IEN BUSINESS SCHOOL

Accounting

ACCO 111  Introduction to Accounting I  
4 Credits

The course of accounting fundamentals includes theory of debit and credit and its effects in the financial statements. Practice in account management. Principles and analysis of preparing a worksheet and financial statements. Includes inventory accounting and accounts receivable, voucher systems, concepts and principles of bank statement reconciliation.

ACCO 112  Introduction to Accounting II  
4 Credits

The course includes the basic concepts in registering fixed assets and equipment. Methods of depreciation and payroll accounting. Also includes the accounting principles for the regulation of societies and corporations and the preparation of statements of cash flow. The course encourages analytical thinking and problem solving. Prerequisite: ACCO 111
ACCO 201 Intermediate Accounting I
4 Credits

Analysis of generally accepted accounting principles and their application in preparing financial statements. Study of the problems related to the control, valuation, presentation, recording cash, accounts receivable and inventory. Prerequisite: ACCO 112

ACCO 202 Intermediate Accounting II
4 Credits

This course includes the analysis of the different ways to obtain financing. Ways of entering the emission of debts and stocks. Also, it includes accounting of fixed assets, investments, funds and debts, leasing, income tax and payroll. It also analyzes cash flow. Prerequisite: ACCO 202

ACCO 203 Cost Accounting
4 Credits

This course covers fundamental principles of cost accounting; methods of determining the basis and classification of costs in a manufacturing, distribution or service organization; solutions to cost problems; preparation of cost reports; use of forms and records; and overhead and wage systems in industry. Prerequisite: ACCO 112

ACCO 250 Computerized Accounting
3 Credits

This course presents to the student the commonly used computerized accounting systems and also provides practice in the use of these systems. The approach of the course is to apply accounting concepts through the use of already available software. One hour of laboratory practice is required. Elective course Prerequisites: ACCO 112 and COIS 111

Management

MANA 204 Elements of Business Law
4 Credits

Studies the legal aspects of business transactions with particular emphasis on legislation in Puerto Rico. Special attention is given to contracts, sales, negotiable instruments, personal property, insurance, conveyance, mortgage deeds, and the relationship of government to business. Prerequisite: MANA 101

MANA 230 Organizational Behavior
3 Credits

Provides an overview of the individual’s personal characteristics, focusing upon the organizational setting. In order to understand people’s behavior in organizations, students will thoroughly cover the following topics: organizational theory and practices, individual characteristics and social processes, understanding group behavior and organizational objectives, organizational effectiveness and performance. Prerequisite: MANA 101, MANA 210
MANA 316  
Small Businesses Administration  
3 Credits

This course considers all the documentation needed to establish a business operation. The
development of a business plan is discussed. Also, inventory planning and handling are considered
as well as the accounting system, financial analysis quality control and the evaluation of the methods
for establishing the efficiency and productivity of employees, among others. The marketing of the
business as well as of its products and services are fundamental aspects of this course. Prerequisite:
MANA 101, MANA 213, MARK 133, ACCO 112

Finance

FINA 202  
Business Finance  
3 Credits

This course studies the fundamental principles involved in raising, administering and distributing
funds of an enterprise. Different types of businesses are examined, with emphasis on the modern
corporate systems. It analyzes working capital management and its components: current assets and
liabilities. Capital structure, capital budgeting, cost of capital; short, intermediate and long-term
financing are examined. Emphasis is placed on decision making concepts and variables.  
Prerequisite: ACCO 112

Marketing

MARK 133  
Principles of Marketing  
3 Credits

This course studies marketing as a business function and social process, including problems and
policies of manufacturers, wholesalers and retailers in the marketing of goods and services. Studies
channels of distribution, unfair competition, functions of sales departments, market research and
analysis applied to economic conditions in Puerto Rico. Prerequisite: MANA 101

Statistics

STAT 201  
Business Statistics  
3 Credits

Introduction to Business Statistics. This course is basic descriptive statistics: frequency distribution,
measure of dispersion, time-series, index numbers, probability theory and measures of central
value. Prerequisite: MATH 119
BIOL 103  
Anatomy and Physiology I  
4 Credits

This course studies the fundamental concepts of Human Anatomy and Physiology. It emphasizes the structure-function relationship of all systems in the human body with a clear understanding of how these systems integrate to achieve homeostasis. Pathological conditions, diagnosis, testing and treatment will also be discussed to enhance understanding of normal body functions. This course covers basic principles of cellular biology and biochemistry as well as the following systems: integumentary, skeletal, muscular, and nervous (including special organs and senses), and endocrine.

BIOL 104  
Anatomy and Physiology II + Lab  
4 Credits

This course studies the fundamental concepts of Human Anatomy and Physiology. It emphasizes the structure-function relationship of all systems in the human body with a clear understanding of how these systems integrate to achieve homeostasis. Pathological conditions, diagnosis, testing and treatment will also be discussed to enhance understanding of normal body functions. This course covers basic principles of cellular biology and biochemistry as well as the following systems: Circulatory (cardiovascular and lymphatic), respiratory, immune, excretory, digestive and reproductive. Prerequisites: BIOL 103

BIOL 203  
General Biology I  
4 Credits

First part of the general biology introductory course. Study of living organisms: characteristics, organization, and diversity. Emphasis is drawn upon specializations, adaptations, biochemical, and metabolic features at different organizational levels. Evolution is worked out as the unifying principle of biology. Inquiry, science processes’ implementation, case studies, field trips, investigative laboratories, cooperative learning, and reflective discussions, among others, help in the development of students’ attitudes and skills for taking personal, ethical and social decisions. Several modalities of students’ assessment and evaluation will secure a holistic student’s learning estimate.

BIOL 204  
General Biology II  
4 Credits

Second part of the general biology course. This course gives the student the opportunity to: a) construct biological concepts that they will need in advanced courses and in their daily life; and their interconnections such as: biodiversity, tissue, organs and animal and plants systems specialization and adaptation, extinction, conservation and factors that determine evolution (natural selection and heritage), b) examine their beliefs and prejudices about biological concepts, c) research where evolution occurred, who is affected, d) be aware of the historical development of some biological ideas, e) develop scientific values and skills, and g) make personal, ethical, and social decisions. Prerequisites: BIOL 203
BIOL 335  
Advanced Cardiovascular Anatomy and Physiology  
2 Credits

The course is an in-depth study of cardiovascular anatomy and physiology, with emphasis on venous and arterial hemodynamics. This course also includes discussion of the pathophysiological basis of cardiovascular disease. Prerequisites: BIOL 231, 232

Chemistry

CHEM 203  
General Chemistry I  
4 Credits

First part of the introductory course of fundamental concepts in chemistry. Study of matter, its composition, properties, physical changes, and energy transformations related to these physical changes. Analysis of relevant environmental issues related to chemistry concepts. Promotion of decision-making on controversial issues involving chemistry and ethics. Investigative activities that promote the development of higher thinking process and hands-on experience on doing science. Prerequisites: MATH 118

CHEM 204  
General Chemistry II  
4 Credits

Second part of the introductory course of fundamental concepts in chemistry. Study of matter, its composition, properties, chemical reactions, and energy transformations related to these reactions. Analysis of relevant environmental issues related to the chemistry concepts studied. Promotion of decision-making on controversial issues involving chemistry and ethics. Investigative activities that promote the development of higher thinking processes and hand-on doing science. Prerequisites: CHEM 203, MATH 130

CHEM 351  
Organic Chemistry I  
4 Credits

Applies quantum mechanics concepts to explain the electronic structure of the carbon atom. Includes the molecular orbit theory, which explains the formation of the covalent bonds in organic molecules. Describes the structural isomerism and the stereochemistry, which provide for the chemical properties of the organic molecules. Nomenclature, structure and reactions of hydrocarbons, alkyls halides, alcohol, ethers and other aromatic compounds are described in this course. Determination of the organic structures using spectroscopy is performed. Laboratory practices include techniques required to analyze the chemical properties of organic molecules, reactions, and synthesis. Prerequisite: CHEM 204

CHEM 352  
Organic Chemistry II  
4 Credits

Study of the chemical and physical properties of organic compounds as continued from the first part of the course. Groups of compounds such as aromatics, aldehydes, carboxylic acids and derivatives, amines and carbohydrates will be emphasized. Structure, reactions properties and synthesis of the various compounds will be analyzed. Applications and important uses of the compounds will be
described using literature. The course is developed through lectures, interactive demos, problem solving and oral presentations, among others. Properties, reactions and synthesis of the compounds will be established through a series of laboratories. Prerequisite: CHEM 351

### Physics

**PHSC 203**  
*General Physics I*  
*4 Credits*

Course developed from concrete sequential experiences, use of analogies and problem solving to contribute to increase the scientific literacy in the students. This course seeks conceptual understanding by integration among concepts and disciplines and multi-contextual evaluation. The key concepts of this course are the force and its relation with movement, "spatial" (work) and "time" (impulse) effects and how these concepts reveal the conservation of physical quantities like energy, among others. The concepts of field and potential and the analogy of the gravitational field with the electric field are also studies. Prerequisites: MATH 221

**PHSC 204**  
*General Physics II*  
*4 Credits*

This course studies the dynamics of distinct entities such as: fluids, heat, electric changes, and waves; the behavior of matter and its energetic character at atomic level are also studied. Emphasis is given on studying analog systems to provide students the opportunity to recognize similar patterns among the above mentioned dynamics; concrete experiences are used in a classroom-lab environment but emphasis is given on abstraction in order for the student to refine this skill. This course also intends to contribute to increase scientific literacy in the students and that they perceive Physics as a toll to interpret the world. Prerequisites: PHSC 203

### Mathematics

**MATH 221**  
*Analytic Geometry & Calculus I*  
*4 Credits*

This course covers the following advanced mathematic principles: the limit of a function, theorem of limit, continuity, the derivative, differentiation of algebraic, trigonometric and logarithmic functions, applications to physics, fundamental theorem of differential calculus, Ralle theorem, mean value theorem, applications of the derivative to the drawing of curves, assumptions and primitive functions, the properties of Cauchy and Riemann additions, gravity, inertia and pressure centers, Legesque integral and integration methods. Prerequisite: MATH 131

**MATH 222**  
*Calculus II*  
*4 credits*

Study of integration techniques, applications integration techniques, differentiation and integration of inverse trigonometric functions, hyperbolic functions. Solids of revolution, improper integrals and L'Hospital's rule. Sequences and series, parametric equations and polar coordinates.
MATH 304  Biostatistics for Science  4 Credits

Study of theory, sampling methods, summarization and graphic representation of data. Measures of central tendencies, location and spread will be determined. Application of probability, combinations and permutations, probability distributions and the central limit theorem. Study of hypothesis testing, confidence intervals, T or Z test, correlations, linear regressions, Chi-square test, and variance analysis through cooperative learning, research projects, concept mapping, and oral presentations.

SCHOOL OF HEALTH SCIENCES

Health Sciences

HESC 121  Patient Care and Emergency Procedures in Medical Imaging  3 Credits

This course has been designed as an introduction to specific principles in the field of nursing and all that is related to patient care and emergency procedures in medical imaging. Concepts such as emergency units, patient movement, and transfer, aseptic techniques during the administration of contrast media, recognition of allergenic reactions, vital signs, first aid cardiopulmonary resuscitation, legal aspects, cardiac arrest, technologist’s role with injury patients and management of contrast media are emphasized. (3) Hours per week. Prerequisites: Official admission to Radiologic Technology, Medical Sonography or Computerized Tomography Programs.

HESC 125  Anatomy and Physiology for Health I  4 Credits

The course offers fundamental concepts of anatomy and human physiology. The relationship between structure, function and its integration within the different systems of the human body are emphasized. The course covers the basic principles of biochemistry and cellular biology including the integumentary, skeletal, muscular nervous and endocrine systems. The course incorporates pathological conditions, medical terminology and other more common diagnostic exams for different conditions. 3 hours of lecture and 3 hours of laboratory per week.

HESC 126  Anatomy and Physiology for Health II  4 Credits

The course offers fundamental concepts of anatomy and human physiology. The relationship between structure, function and its integration within the different systems of the human body are emphasized. Pathological conditions, diagnostic exams and diagnosis and treatment will be discussed. The course covers the basic principles of biochemistry and cellular biology, the circulatory (cardiovascular and lymphatic), respiratory, digestive, immune, reproductive and urinary systems. The course incorporates medical terminology and exams in order to recognize structures, pathologies or illnesses. The responsible use of technology is encouraged. 3 hours of lecture and 3 hours of laboratory per week.
HESC 200  Computer and Medical Information
3 Credits
This course offers an introduction to information literacy. It covers computer history, its component and infections. It describes the use and applications of computers in the different diagnostic imaging modalities; as well as the production and data processing used. Emphasis will be given to data acquisition and analysis of images in Computed Tomography, Magnetic Resonance Imaging, Medical Sonography, Radiologic Technology, and Nuclear Medicine.

HESC 207  Microbiology for Health Sciences
4 Credits
The course provides students with microbiology fundamentals and their relationship to individual health. The course permits the student to develop skills and competencies necessary for effective and safe performance in the clinical-hospital setting. Through the theoretic component the student familiarizes himself with different groups of microorganisms, paying major attention to those which affect human health. Attention is focused on the basic principles of microbiology such as morphology, physiology, identification and bacterial afflictions, molds, viruses and their relationship to diseases. In addition, infection epidemiology, host defenses and immunological principles and the application of this knowledge in the prevention of disease are developed in this course. The laboratory component provides the student with skills related to aseptic techniques, disinfection, tincture, isolation and culture of microorganisms. Methods of bacterial growth control are also emphasized.

Psychology

PSYC 212  Health Psychology
3 Credits
This course offers the student an introduction to the study of human behavior. Emphasis is placed on the behavior of the organism. Primary prevention techniques that lead to healthy behaviors are discussed, as well as, how to modify these in the treatment scenario. The student will have the opportunity to apply these techniques in his/her clinical scenario.

Public Health

PUHE 101  Introduction to Public Health and Health Education
3 Credits
Introduction to the different conceptions about health, as well as, the basic principles of public health and education. Analysis of the relationships that exist among the 4 major factors that determine health. Deals with various epidemiologic concepts about health and illness, the natural history of diseases, attention and prevention levels, specific protection measures and health promotion. Emphasis is placed on existing health education models for individual and community intervention.
PUHE 201  Introduction to Biostatistics  
3 Credits

Basic concepts and principles of statistics applied to life and health. Emphasis in the basic techniques used in scientific research, primarily in areas of health education and public health. Analysis of the major statistical concepts such as: the scientific method and the statistics method and others.

PUHE 203  Introductions to Epidemiology  
3 Credits

Studies the occurrence, distribution and causes of diseases in communities using the epidemiologic method. The epidemiologic, as well as, the scientific method are applied to the health-illness process and its causes, particularly transmissible, chronic, mental diseases and high-risk behaviors. Prerequisite: PUHE 201

PUHE 210  Biological Aspects of Human Diseases  
4 Credits

Develops sound scientific attitudes, the concepts and the basic biological processes of diseases, such as: inflammation, immunological reactions, regeneration and growth control, fibrosis and necrosis using the scientific method as the tool. Pathogenesis is incorporated to the various perspectives of epidemiology and disease control as they relate to public health. Laboratory experiences promote the application of technology to the study of the principal human diseases and agents that cause them. Prerequisites: PUHE 101
Statement of Policy
This catalog includes the main terms concerning the formal relationship between students and Universidad Del Este. Regardless of its effective date, the Institution reserves the right to admit, re-admit or register a student only for a semester or session separately. The Institution binds itself only during the semester for which the student has enrolled and paid his/her tuition fees. It is the student’s responsibility to know and comply with the content of this catalog and all of the Universidad Del Este’s rules and regulations. This catalog complies with the institution’s bylaws, regulations, administrative orders, and duties under Federal Law. It is subject to subsequent amendments. This Catalog is electronically available to students at least one week prior to enrollment. Students will be informed of any changes or amendments made to the Catalog.

Copyright © 2012 Universidad del Este, AGMUS. All rights reserved.