



## Requisitos y su equivalencia en universidades de Estados Unidos

| Medicine (MD)         |   |          |       |        |
|-----------------------|---|----------|-------|--------|
| Requisitos            | Equivalencia  | Carolina | Cupey | Gurabo |
| Biology (8 credits)   | <b>BIOL 203 - GENERAL BIOLOGY I 4 CREDITS</b>   | X        | X     | X      |
|                       | An introductory survey of current biological concepts for students majoring in the sciences. Emphasis will be placed on topics which include characteristics of living things, scientific method, biologically important compounds and molecules, cells, energy and metabolism, genetics, evolution and ethical aspects related to technology and scientific research.  |          |       |        |
|                       | <b>BIOL 204 - GENERAL BIOLOGY II 4 CREDITS</b>  | X        | X     | X      |
|                       | General biology course for natural sciences students. Include the following topics: biodiversity, basic concepts of anatomy and physiology of plants and animals, ecology and ethical aspects related to technology and scientific research.  |          |       |        |
| Chemistry (8 credits) | <b>CHEM 203 GENERAL CHEMISTRY I 4 CREDITS</b>   | X        | X     | X      |
|                       | Emphasis in this course is aimed to the study of the states of the matter, atomic and molecular structures, nomenclature of inorganic compounds, classification of elements in the periodic table, chemical bond, chemical equations and reactions, stoichiometry. In the laboratory students are trained in the use of basic laboratory techniques such as the use of volumetric equipment, titration and qualitative analysis. Students are taught to keep a good laboratory notebook and safety on the laboratory.   |          |       |        |
|                       | <b>CHEM 204 - GENERAL CHEMISTRY II 4 CREDITS</b>  | X        | X     | X      |
|                       | 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. One semester, 3 hours of lecture, and 3 hours of laboratory per week. |          |       |        |

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| Organic Chemistry (8 credits) | <b>CHEM 351 - ORGANIC CHEMISTRY I 4 CREDITS</b>  | <b>X</b> | <b>X</b> | <b>X</b> |
|                               | The Organic chemistry course studies the carbon and hydrogen compounds and its derivatives with others heteroatom such as: halogens, oxygen, nitrogen, sulfur, phosphorus and some metals. This course discusses the nomenclature and physical properties of the different families of organic compounds. The synthetic methods and the reactions of the alkanes, alkenes, cycloalkanes, alkynes, dienes, alkyl halides, aromatic compounds, and derivatives are also presented. Emphasis is done the reactions mechanisms, specially: SN1, SN2, E-1, E-2, double and triple bonds additions, electrophilic aromatic substitutions in benzene and its derivatives, alcohols dehydration, aldol condensation, Cannizzaro reaction, epoxidation of alkenes, Sandmeyer reaction and Cope and Hofmann amines elimination.  |          |          |          |
|                               | <b>CHEM 352 - ORGANIC CHEMISTRY II 4 CREDITS</b>   | <b>X</b> | <b>X</b> | <b>X</b> |
|                               | The Organic chemistry course studies the carbon and hydrogen compounds and its derivatives with others heteroatom such as: halogens, oxygen, nitrogen, sulfur, phosphorus and some metals. This course discusses the nomenclature and physical properties of the different families of organic compounds. The synthetic methods and the reactions of the alkanes, alkenes, cycloalkanes, alkynes, dienes, alkyl halides, aromatic compounds, and derivatives are also presented. Emphasis is done the reactions mechanisms, specially: SN1, SN2, E-1, E-2, double and triple bonds additions, electrophilic aromatic substitutions in benzene and its derivatives, alcohols dehydration, aldol condensation, Cannizzaro reaction, epoxidation of alkenes, Sandmeyer reaction and Cope and Hofmann amines elimination. With respect to the compound structure, the course discusses the structural, geometrical and optical isomerism, emphasizing the conditions that have to be fulfilled for them to exist. The spectroscopic method of analysis and identification of functional group and structure assignment are discussed. Specifically, IR, UV, NMR and MS spectroscopy. |          |          |          |
| Physics (8 credits)           | <b>PHSC 203 - GENERAL PHYSICS I 4 CREDITS</b>  | <b>X</b> | <b>X</b> | <b>X</b> |
|                               | The course provides skills to understand the world that surrounds the student. The student will learn to explain physical phenomena and will discover principles and laws that have connections with other disciplines and apply to analog phenomena and broader situations. This way, he will recognize the broad scope of Physics. For this, the student will strengthen the correct use of the language of the discipline, perform cooperative experiments where will manipulate instruments and take measurements that will report clearly and precisely. Topics are covered in sequential manner, integrating an inductive and deductive format. The applications cover from the simple free fall to orbiting satellites, based on the laws of movement and their relation with energy. Slightly emphasis given on integral calculus. Student will be evaluated with a variety of instruments, in class as well as online Course.   |          |          |          |
|                               | <b>PHSC 204 - GENERAL PHYSICS II 3 CREDITS</b>   | <b>X</b> | <b>X</b> | <b>X</b> |
|                               | The course contains concepts, physical amounts and laws to interpret and to describe to the electromagnetic processes in the nature and the technique, as well as the fundamental characteristics of the waves (mechanical and luminous), presenting with a mathematical level of depth of differentials variations: derive and integration. Algebra and trigonometry will be used with amplitude, as well as the calculations with vectoral amounts. The differential calculus will be used with potential, sine, cosine and exponential functions. The laws of electromagnetism will appear in their integral form, but the situations to solve will be with fields of high symmetry (variant of the cases seen in classes).   |          |          |          |
|                               | <b>MAGS 120 - INTRODUCTION TO ALGEBRA 3 CREDITS</b>  |          |          | <b>X</b> |

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| Mathematics (6 credits)                    | <p>This course develops introductory concepts of algebra such as, the study of rational numbers, reasoning, proportion, percentages, algebraic expressions, linear equations, uneven linear, and polynomial concepts. It emphasizes problem solving applied to daily life situations and other areas of knowledge. The course also focuses on the development of quantitative reasoning competence and it integrates the responsible use of technology and information. In addition to the three (3) weekly conference hours required, the student must attend three (3) weekly laboratory hours.</p>   |          |          |          |
|  | <b>MATH 121 - INTERMEDIATE ALGEBRA 3 CREDITS</b>  |          |          | <b>X</b> |
|  | <p>This course covers factorization of polynomials, linear inequalities, problem solving; absolute-value equations and inequalities; operations and simplifications with algebraic fractions; linear equation graphics, linear equations systems and solution methods; graphics, substitution and elimination. Topics include inequalities for two variables and rational exponentials, as well as solution of radical expressions, equations involving radicals, and quadratic inequalities. Emphasis is on problem-solving.</p>   |          |          |          |
| Behavioral and Social Science* (6 credits) | <b>SOGS 201 - HUMAN BEING AND SOCIAL CONSCIOUSNESS 3 CREDITS</b>  | <b>X</b> | <b>X</b> | <b>X</b> |
|  | <p>The course studies the social interaction and socialization processes that human beings undergo, from different theoretical perspectives. Exploration and explanation of the ways in which social stability is produced and reproduced over time. Critical analysis of social life, with the human being as primary subject and agent within the social structure. Emphasis on the development of different ideologies, forms of thought, and worldviews through which people interpret, and contribute to the production and reproduction of the social whole. The course contributes to the student's scholarly formation by providing a better understanding of the self within diverse social, cultural, and historical contexts. It is a competency-based course that encourages the responsible use of technology and information. This course will develop primary competencies such as, Critical thinking, Scientific inquiry, and Ethics and diversity, through the analysis and reflection on the topics and problems previously mentioned that permit the student to evaluate and propose solutions in regards to them.</p> |          |          |          |
|  | <b>SOGS 202 - QUESTIONING POLITICS ECONOMY 3 CREDITS</b>  | <b>X</b> | <b>X</b> | <b>X</b> |
|  | <p>This course includes a critical analysis of the complex dynamics, processes, and institutions that constitute the political community. A political community comprehends, among other things, subjects articulated into particular and diverse social relations emanating from the actions of the institution we call the state. Examination of issues related to the different political and economic systems, as well as what should be expected by citizens in a democratic polity. Analysis of the impact on politics of contemporary phenomena such as neoliberalism, globalization, international relations, and threats to the environment. The course is competency-based and encourages the responsible use of technology and information. This course will develop primary competencies in Critical Thinking and Ethics and Diversity, through the analysis and reflection on the topics and problems mentioned above, that will permit the student to evaluate and propose solutions in regards to them.</p>  |          |          |          |
|  | <b>SPGS 152 - FUNDAMENTALS OF READING AND WRITING 3 CREDITS</b>   | <b>X</b> | <b>X</b> | <b>X</b> |

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| Spanish (3 credits) | <p>This course develops paragraph writing competencies and the characteristics and methods for the organization of ideas through the reading and analysis of texts. Basic elements of communication and the Spanish language are studied, in addition to the features of narrative and descriptive discourse. The course is based on the development of communicative competence and critical thinking, and it integrates the responsible use of technology and information.</p>  |   |   |   |
| English (3 credits) | <p><b>ENGS 152 - FUNDAMENTALS OF SPEAKING, READING, AND WRITING ENGLISH I 3 CREDITS</b></p>   | X | X | X |
|                     | <p>This competency-focused course develops and strengthens students' listening, speaking, reading, and writing proficiency in English through an integrated language arts approach. Students will engage in oral communication competencies to fit the purpose and context of diverse situations. Reading comprehension competencies focus on the analysis of fiction and non-fiction texts from a global perspective to produce different types of paragraphs and short essays expressing diverse points of view. This course involves the responsible use of technology and information skills to generate new knowledge.</p> |   |   |   |