

## Course Syllabus

### COMPUTERS AND SOCIETY

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Program: Computer Science

#### 1. Course number and name

CCPG1004 - COMPUTERS AND SOCIETY

#### 2. Credits and contact hours

3 credits and 3 contact hours

#### 3. Instructor's course or coordinator's name

OTILIA MARIA ALEJANDRO MOLINA

#### 4. Text book, title, author, and year

\*Nell Dale & John Lewis. Computer Science Illuminated (6th)

a. Other supplemental materials

\*Luis Gorgona S.. Teoría de redes de computadoras ()

\* ROBERTO FELTRERO. Ética de la computación: principios de funcionalidad y diseño ()

\*Michael J. Quinn. Ethics for the information Age (7th)

\*OMPI Organización Mundial de la Propiedad Intelectual. ¿Qué es la Propiedad Intelectual? ()

\*Organización de las Naciones Unidas. Los residuos electrónicos. Un desafío para la Sociedad del Conocimiento en America Latina y el Caribe (Unesco Montevideo)

\*Soc. Wilfredo López. HISTORIA DE LA COMPUTACIÓN ()

\*JUAN BERNARDO VAZQUEZ GOMEZ. Arquitectura de Computadores I (PRIMERA EDICION)

\*Eugenio Severín \*, Christine Capota \*\*. LA COMPUTACIÓN UNO A UNO: NUEVAS PERSPECTIVAS ()

\*Luis Entrena, Celia López, Mario García, Enrique San Millán. Representación de la Información en los Sistemas Digitales ()

\*Louis Columbus. 15 Top Paying IT Certifications In 2017 ()

\*Henry Campos Vargas. EL MIEDO EN LA ARGUMENTACIÓN: UNA APROXIMACIÓN ÉTICA ()

\*Cécile de Terwangne. Privacidad en Internet y el derecho a ser olvidado/derecho al olvido ()

#### 5. Specific course information

a. Brief description of the content of the course (catalog description)

This course focuses on the history of computing and the basic concepts of hardware and software of a computer system. This course introduces the computer science engineering profession and its different fields of study. The ethical and social implications of engineering in computer science are studied too. Likewise, it covers the impact of information systems on individuals, organizations and society, the responsibility of computing engineers, the proper use of emerging technologies and the concepts of intellectual property and privacy through case studies

b. This course is a: Required

#### 6. Specific goals for the course

a. Specific outcomes of instruction



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- 1.- Identify the most important advances and the characters that have marked the history of computing, for the construction of a knowledge base towards the creation of new technological trends
  - 2.- Explain the ethical responsibility of the profession, recognizing both the ethical values of the individual, and the codes of ethics of companies and professional organizations
  - 3.- Analyze the impact that computational solutions have on individuals and organizations, for the improvement of society
  - 4.- Discuss new applications of the information technologies to solve real problems in society
  - 5.- Acknowledge the need for continuous learning and the professional development of computational sciences professionals given by the dynamic change of technology.
- b. Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course
- (4) Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
  - (7) An ability to lead, manage and undertake projects.

#### 7. Brief list of topics to be covered

- 1.- Computing history
- 2.- Computers, basic functionality, computing devices and internet
- 3.- Social implications in the knowledge society
- 4.- Representation of information in computational systems
- 5.- Professional in computing sciences
- 6.- Analytical and professional communication tools
- 7.- Privacy, intellectual property
- 8.- Professional ethics

