ESCUELA SUPERIOR POLITÉCNICA DEL LITORAL
COURSE SYLLABUS
INFORMATION SECURITY

Program: Computer Science

1. Course number and name
CCPG1003 - INFORMATION SECURITY

2. Credits and contact hours
3 credits and 3 contact hours

3. Instructor's course or coordinator's name
RAFAEL IGNACIO BONILLA ARMIJOS

4. Text book, tittle, author, and year
*Anderson, Ross. Security engineering: a guide to building dependable distributed systems (Second Edition)

5. Specific course information
   a.   Brief description of the content of the course (catalog description)

   This course covers the fundamental and practical aspects of systems security computing, including data networks, with an applied approach. In general terms, information security seeks to keep data away from dangerous situations but also involves aspects of computers, communications, operations and physical security.

   b.   Prerequisites

   SYSTEMS PROGRAMMING - CCPG1008

   c.   This course is a: Required

6. Specific goals for the course
   a.   Specific outcomes of instruction

   1.- Evaluate the confidentiality, integrity and availability aspects to produce systems that are safe and easy to use

   2.- Recognize risks, threats, vulnerabilities and attack vectors to propose appropriate solutions

   3.- Apply cryptographic algorithms in data communications to protect the exchange of information between systems

   4.- Apply the relevant principles of security in the design of secure systems, including computer programs and data networks

   b.   Explicity indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course

7. Brief list of topics to be covered
   1.- Fundamental concepts in security

   2.- Threats and attacks

   3.- Cryptography

   4.- Security of operating systems

   5.- Network security

   6.- Principles of safe design

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7.- Defensive Programming

8.- Web Security

9.- Human factor and security

10.- Physical Security

11.- Security policies, laws and computer crimes