Professional and Social Aspects of Computer Science › 40386

course unit code	40386
scientific area	Computer Science
credits	6
contact hours	theoretical/practical sessions (TP) - 3 hours/week
language(s) of instruction	Portuguese, English
teacher	Anibal Manuel de Oliveira Duarte

objectives

The purpose of this discipline is to provide a general overview about the profession of an informatics engineeer and his relation with society.

learning outcomes

This course aims to provide a broad understanding of the informatics engineering profession and the technological, regulatory and ethical challenges it faces.

It seeks to develop the capacity to deal with the following aspects:
- Possible social impacts of the use of informatic products and services.
- Possible attitudes towards the challenges of the profession and its personal implications.

contents

- Informatics engineering profession key aspects:
  * Dealing with products and services that provoque effects from a local to a global scale, having considerable impact upon the life of almost every person and organization.
  * Dealing with processes that transcend the understanding of a large majority ot its users, exposing them to dangers that, many times, they do not suspect.
  * Dealing with technologies and knowledge that is in constant mutation creating the need for frequent requalification of competencies.
  * Acting in environments where, simultaneously, coexist collaborative and individual patterns of work:
    + Interaction and communication atitudes.
    + Basic rules for personal and profissional communication.

- Informatics engineering eco-system:
  * The role of school, peers and conscience.
  * Standardization and regulation.
  * Security and safety.
  * Privacy and data protection.
  * Intelectual property rights and licencing.

- Organization and management principles:
  * Prevailing business modles in the informatics sector

- Innovation and entrepreneurship: concepts, trends and techno-fashions.

assessment

Discret Assessment:

- 25.00% TP (Individual Assignments)
- 25.00% TP (Grup Assignment)

requisites

No requirements.

teaching methods

The methodology used in the course is based on two main components:
- A tutorial component:
The initial part of each session adreesses a particular aspect of the course sylabus in the form of exposure and joint reflection with the students.
- A case study component:
The second part of each session is developed around a set of case studies where the topics addres in the tutorial component are applied.
The case studies are representative of professional realities, inviting the active involvement of the student in the construction of the respective scenarios and in the search for solutions.

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abbreviated

- A Gift of Fire: Social, Legal, and Ethical Issues for Computing Technology (4th edition): Sara Baase (2013) ISBN-13: 978-0132492676, Pearson. - The Rise of the Network Society. The Information Age: Economy, Society and Culture (2nd edition): Manuel Castells (2000), ISBN-13: 978-1405196864, Blackwell.

recommended bibliography

- Sara Baase, "A Gift of Fire: Social, Legal, and Ethical Issues for Computing Technology", ed. 4, (2013), ISBN-13: 978-0132492676, Pearson.

- Manuel Castells, "The Rise of the Network Society. The Information Age: Economy, Society and Culture" ed. 2, (2000), ISBN-13: 978-1405196864, Blackwell.

- George Reynolds, "Ethics in Information Technology", ed. 5, (2015), ISBN-13: 9781285197159 / ISBN-10: 1285197151, Cengage Learning.

- Sellected set of pappers available in the course Moodle workspace.