



**Universidad Nacional Mayor de San Marcos**  
**School of Computer Science**  
**Syllabus of Course**  
**Academic Period 2018-II**

1. **Code and Name:** GH0010. Ethics and Technology (Mandatory)
2. **Credits:** 2
3. **Hours of theory and Lab:** 1 HT; 2 HP; (15 weeks)
4. **Professor(s)**

Meetings after coordination with the professor

**5. Bibliography**

- [Alo06] García. Alonso. *Ética o Filosofía moral*. México, Editorial Trillas, 2006.  
[Mar05] Alvarado. Martín. *Ética*. México, Editorial Trillas, 2005.

**6. Information about the course**

- (a) **Brief description about the course** This course seeks to provide students with certain frameworks with which to analyze the dilemmas that can be presented in their professional practice. The course puts in practice the critical and responsible reasoning of the students, being this a fundamental competence for the decision-making processes that we will assume as professionals and citizens.
- (b) **Prerequisites:** GH0006. Communication Laboratory II. (2<sup>nd</sup> Sem)
- (c) **Type of Course:** Mandatory
- (d) **Modality:** Face to face

**7. Specific goals of the Course**

- Introduce students to critical and ethical thinking applied to their professional field.
- Developing the competence to look at a phenomenon from various disciplines and perspectives generates in the person empathy and respect for diversity of opinion.
- Ability to work in a team.
- Ability to identify problems
- Oral communication skills
- He is interested in learning about current issues of Peruvian society and the world.
- Written communication skills..

**8. Contribution to Outcomes**

- d) An ability to function on multidisciplinary teams. (**Usage**)
- e) Understand correctly the professional, ethical, legal, security and social implications of the profession. (**Usage**)
- f) An ability to communicate effectively. (**Usage**)
- n) Apply knowledge of the humanities in their professional work. (**Usage**)
- o) Improve the conditions of society by putting technology at the service of the human being. (**Usage**)

## 9. Competences (IEEE)

**C10.** Understanding of the impact on individuals, organizations, and society of deploying technological solutions and interventions. ⇒ **Outcome d,n,o**

**C17.** Ability to properly express in oral and written media as expected from a university graduate. ⇒ **Outcome f**

**C18.** Ability to participate actively and as a member of a team. ⇒ **Outcome f**

**C21.** Understanding the professional, legal, security, political, humanistic, environmental, cultural and ethical issues. ⇒ **Outcome e**

## 10. List of topics

1. Ética, ciencia y tecnología.
2. Responsabilidad en la ciencia e ingeniería
3. Ciudadanía y ejercicio de la justicia en la era digital

## 11. Methodology and Evaluation

### Methodology:

#### Theory Sessions:

The theory sessions are held in master classes with activities including active learning and roleplay to allow students to internalize the concepts.

#### Lab Sessions:

In order to verify their competences, several activities including active learning and roleplay will be developed during lab sessions.

#### Oral Presentations:

Individual and team participation is encouraged to present their ideas, motivating them with additional points in the different stages of the course evaluation.

#### Reading:

Throughout the course different readings are provided, which are evaluated. The average of the notes in the readings is considered as the mark of a qualified practice. The use of the UTEC Online virtual campus allows each student to access the course information, and interact outside the classroom with the teacher and with the other students.

#### Evaluation System:

## 12. Content

<b>Unit 1: Ética, ciencia y tecnología. (12)</b>	
<b>Competences Expected: 4</b>	
<b>Learning Outcomes</b>	<b>Topics</b>
<ul style="list-style-type: none"><li>• Strengthen the student's ability to think interdisciplinarily.</li></ul>	<ul style="list-style-type: none"><li>• Definition and scope of ethics Critical thinking / ethical argumentation.</li><li>• Science and Technology, are engineering and technology issues objective?</li><li>• Technology: concept and limits.</li><li>• Importance of ethics in science and engineering.</li></ul>
<b>Readings :</b> [Alo06]	

<b>Unit 2: Responsabilidad en la ciencia e ingeniería (24)</b>	
<b>Competences Expected: 3</b>	
<b>Learning Outcomes</b>	<b>Topics</b>
<ul style="list-style-type: none"> <li>• Understand professional and ethical responsibilities.</li> </ul>	<ul style="list-style-type: none"> <li>• Scope of the concept Responsibility in science (Imperative of Responsibility)</li> <li>• Introduction to the subject Responsibility / freedom</li> </ul>
<b>Readings :</b> [Mar05]	

<b>Unit 3: Ciudadanía y ejercicio de la justicia en la era digital (30)</b>	
<b>Competences Expected: 3</b>	
<b>Learning Outcomes</b>	<b>Topics</b>
<ul style="list-style-type: none"> <li>• Understands the impact of engineering solutions in a global, economic, environmental and societal context.</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction to the issue of citizenship in the digital age</li> <li>• Technology, new activism and citizenship</li> </ul>
<b>Readings :</b> [Mar05]	