SUBJECT PROGRAM

I. IDENTIFICATION OF THE SUBJECT

Subject: **Engineering, Informatics and Society**			Acronym: **INF-276**	Approval date 10/11/2016 (CC.DD. Agreement 13/2016)		
UTFSM Credits : **3**	Prerequisites: **INF-270**		Exam: **Does not have**	Faculty		
SCT Credits : **5**				**Computer Science Department**		
Lecture Hours Weekly : **3**	Weekly Assistantship Hours: **0**		Weekly Laboratory Hours: **0**	Semester in which it is taught		
				Odd	Pair	Both **X**
Formative axis			: **Applied Engineering - IT Business Processes**			
Total time dedicated to the subject			: **150 chronological hours**			

Subject Description

The development of this subject seeks to promote students' analysis and reflection on their future professional role, and the social responsibilities of engineers. In this context, topics are addressed in the field of social systems and the impacts of scientific and technological activity on people and society, through teaching and learning methodologies that include spaces for discussion and collaborative work.

Entry requirements

- Use technical English in oral and written communication practices.

Contribution to the graduation profile

Specific Competence

- Contribute to the formulation of global organizational strategies considering Information Technologies and people as relevant actors.

Transversal Competencies

- Manifest behaviors and attitudes of social responsibility and tolerance, valuing ethical principles.
- Act with autonomy, flexibility, initiative, and critical thinking when facing professional problems.
- Interact in the environment by establishing communication networks in Spanish and English.

Learning outcomes expected to be achieved in this subject

- **Explains** society as a human product, **using** sociological and biological foundations.
- **Analyzes** the impacts of science and engineering on society, **formulating** a critical argument supported by holistic and ethical perspectives.
- **Reflects** on ethical aspects of the use of scientific and technological knowledge, **basing it** on the norms of social and professional codes of ethics.

Thematic contents

Thematic Unit 1 (UA 1): Person and Society.
- The human and the emergence of social worlds.
- Institutionality and Society.

Thematic Unit 2 (UA 2): Science, Technology and Society.
- Science and Technology.
- Engineering and Society.
- Perspectives for the Engineer in 21st Century societies.

Thematic Unit 3 (UA 3): Social Responsibility of the Engineer.
- Morals and Ethics.
- Ethics in Engineering.
- Ethics in Computer Science.

Teaching and learning methodology

- Presentation and discussion of topics, carried out by the teacher, guests and students.
- Collaborative learning in b-learning modality.
- Projects

Evaluation and grading of the subject. (Adjusted to Institutional Regulations-Regulation No. 1)

Approval requirements and qualification	The Final Grade for the Subject (NFA) will be calculated by multiplying the Evaluation Grade (NE) by a factor determined according to the percentage of attendance at face-to-face activities (aap). **Evaluation Note (NE) =** **0.3*Tasks + 0.3*Contest Mark + 0.4*Project Mark** **NFA = NE, if aap >= 0.8** **NFA = aap*NE, if aap < 0.8** The project will be evaluated based on 3 reports (1, 2 and 3) weighted: 0.4; 0.2 and 0.4, respectively. There will be 1 competition for understanding and application of the subject. Students will do 3 weighted tasks: **T1=0.5; T2=0.25, and T3=0.25,** respectively.

Learning Resources

Virtual platform

Bibliography:

Guide Text	Chapters of: • Berger P. & Luckmann T. (1986) *The social construction of reality.* Buenos Aires: Amorrortu.
Complementary or Optional	• Hubermas. H. (1986). Science and technology as an ideology. Tecnos, Madrid. • Maturana. H. (1992). The sense of humanity, Humberto Maturana. University Publishing: Santiago. • Articles and monographs by various authors, according to the topics covered in the subject.

II. CALCULATION OF NUMBER OF HOURS OF DEDICATION - (SCT-Chile) - SUBJECT SUMMARY TABLE

ACTIVITY	Number of hours of dedication		
	Number of hours per week	Number of weeks	Total number of hours
PRESENCE			
Lecture or theoretical classes	3	12	36
Assistantship/Exercises			
Industrial visits (Field)			
Laboratories / Workshop			
Evaluations (exams, others)	1.5	1	1.5
Others: Project Reports	1.5	3	4.5
NO PRESENCE			
Assistantship			
Mandatory tasks via web	8	2	16
Study, Individual or group	2	16	32
Others (**PROJECT**)	6	10	60
TOTAL (HOURS)			**150**
Total number of TRANSFERABLE CREDITS			**5**