



HANYANG UNIVERSITY

2018 HISS Syllabus

[Engineer and Society]

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Home Univ.: Stonybrook University
Dept.: Technology and Society

Description: Engineers are expected to deliver technologies to society, taking into consideration safety and the betterment of humanity and the environment. Leadership and professionalism are also expected from engineers to provide considerate guidance on technologies. As technological advances created by engineers can have varied implications on society, engineers have a responsibility and obligation to make ethical decisions regarding these impacts. Therefore, engineers may encounter numerous ethical conundrums and dilemmas, and need to have skillsets for ethical decision-making processes. This course will focus on expanding engineers' knowledge base and communication skills by utilizing business case studies, exercises, and simulations.

Objective: First of all, students will fully comprehend the meaning of engineering and its significant impact on society. Secondly, students will learn about ethical decision-making processes, professional codes of ethics, intellectual property rights and sustainable development. Finally, effective communication, and teambuilding skills will be explored for engineers in global and multi-cultural contexts.

- Understand history of engineering and its impact upon society
- Understand ethical decision making processes for engineers in global and multi-cultural work environments through case studies and in-class discussions
- Understand team dynamics, effective communication and presentation skills, and leadership qualities

Preparations: Saeed Moaveni, Engineering Fundamentals: An Introduction to Engineering. Cengage Learning, 4th ed., 2011, ISBN 978-1-4390-6208-0
Supplemental material will be provided

Schedule:	Week 1	Class 1 Introduction and Networking Class 2 Everyday Engineering Class 3 Engineer's Roles and Responsibilities
	Week 2	Class 4 Engineers in Organizations Class 5 Creativity in Engineering Class 6 Innovation in Engineering Class 7 Project Review/Mid-Term Exam
	Week 3	Class 8 Ethical Decision Making in Engineering Class 9 Social Responsibility

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	Class 10 Management and Leadership Class 11 Design and Teamwork
Week 4	Class 12 Engineering Communication Class 13 Engineering Economics Class 14 Engineering in a Global Environment Class 15 Final Exam/Final Group Presentation

Evaluation:	Midterm (%)	Final (%)	Attendance/ Participation (%)	Assignments (%)	Etc. (%)
	20	25	25	30	00