

EG1001 – Engineers in Society

Course Code	EG1001					
Course Title	Engineers in Society					
Pre-requisites	Nil					
No of AUs	2					
Contact Hours	LECTURES	13	TUTORIAL	13	LAB	0

Course Aims

This course aims to provide a general understanding of the society we live in and the engineers' roles and responsibilities towards society's well-being. The course is part of broadening education objective in the engineering curriculum. The course covers a wide range of topics including the history of engineering, engineering ethics and practices, sustainability, and contributions by engineers towards society in the future. The students will have a holistic understanding of the role played by engineers and on their impact in society.

Intended Learning Outcomes (ILO)

By the end of this course, you (as a student) would be expected to be able to:

1. Illustrate the role engineers play in the development of Singapore and future challenges,
2. Interpret the significance of professional ethics,
3. Interpret the significance of engineering practice in safety and sustainability, and
4. Evaluate the contributions of engineers towards society and potential challenges.

Course Content

	Topics	Lecture Hrs	Tutorial Hrs
1	History of engineering	2	1
2	Engineering ethics	4	2
3	Engineering practice in Singapore (WSH)	2	2
4	Engineering practice in Singapore (Sustainability)	2	1
5	Contribution of Engineers in the Future	2	1
6	Impact of Engineers in society (by external speakers)	1	1

Formative Feedback

Upon finishing your presentation with Q&A, you will receive feedback on whether you have

covered sufficiently with facts/contents, challenges faced/caused/overcome, and going forward with takeaways.

Learning and Teaching Approach

Class meets once per week over 2 hours in lecture format for the first 6 weeks and follow by 1 hour in week 7; and 1 hour in tutorial format for classroom presentation over 13 weeks.

Approach	How does this approach support students in achieving the learning outcomes?
Lecture	Formal lectures on the topics with in-class discussion
Team presentation	This helps you to achieve one or more of the outcomes, as you need to do self-study, research, and then make classroom presentation. (The class is split into 6 presentation teams. Two groups will make presentation with Q&A in each week. You will be grouped into 3-5 students per team.)

Reading and References

References:

1. Johnson Stephen F, Gostelow J Paul and King W Joseph, Engineering and society: challenges of professional practice, Prentice Hall, 2000. (TA157, J73)
2. National Academy of Engineering, The Engineer of 2020: Visions of Engineering in the New Century. (ISBN 978-0-309-09162-6 | DOI 10.17226/10999)
3. Peter M Senge, The Fifth Discipline: The Art & Practice of The Learning Organization, Doubleday, 2006. (ISBN 0-383-51725-4)

Course Policies and Student Responsibilities

1. General

Students are expected to make presentations on all assigned projects and attend all tutorial classes punctually. Students are expected to participate in the Q&A sessions of all the presentations.

2. Absenteeism

The course requires you to attend all tutorial classes to participate in the Q&A sessions of all the presentations. Absence from class without a valid reason will affect your overall course grade. Valid reasons include falling sick supported by a medical certificate and participation in NTU's approved activities supported by an excuse letter from the relevant bodies. There will be no make-up opportunities for in-class presentation activities.

Academic Integrity

Good academic work depends on honesty and ethical behaviour. The quality of your work as a student relies on adhering to the principles of academic integrity and to the NTU Honour Code, a set of values shared by the whole university community. Truth, Trust and Justice are at the core of NTU's shared values.

As a student, it is important that you recognize your responsibilities in understanding and applying the principles of academic integrity in all the work you do at NTU. Not knowing what is involved in maintaining academic integrity does not excuse academic dishonesty. You need to actively equip yourself with strategies to avoid all forms of academic dishonesty, including plagiarism, academic fraud, collusion, and cheating. If you are uncertain of the definitions of any of these terms, you should go to the academic integrity website for more information. Consult your instructor(s) if you need any clarification about the requirements of academic integrity in the course.