CCO203 Sustainability, Technology and Society

Level: 2

Credit Units: 5 Credit Units

Language: ENGLISH

Presentation Pattern:

Synopsis:

CCO203 Sustainability, Technology and Society is an application platform upon which students shall apply their systems and critical thinking skills to actively engage in debate and discussions on the complex dynamic interactions of technology, society and environmental sustainability. The course curriculum aims to inculcate students with the following skill sets:
a. Scientific Inquiry: Students shall embark on the history of technology to understand how technology is developed. Through this, students shall be able to understand some specific methods of inquiry by which technology has progressed. They will acquire knowledge in key technologies such as Energy, Water, Health, Computer and Nanotechnology, and also be made aware of technologies that make an impact on the biosphere and its resources.
b. Complexity: With the acquired knowledge and through discussions, students will move beyond simplistic or silo-based concepts of technology and society. They will learn as a team to debate on issues that relate to technology, society and the environment.
c. Critical Thinking: Equipped with the necessary skills from level 1, students will be able to actively and critically engage in discussions on the dynamic interactions of technology, society and sustainability, and their impact on Earth's resources and Man's survivability. Thus, students will be able to develop the analytical and evaluative skills in conceptualising their own independent judgment on the impact of technology on society and environment (and vice versa) in the context of the triple bottom line .
The course covers a broad spectrum of technologies, viz., computer, health, nanotechnology, environment and renewable energy, as well as on the sustainability topic that relate to liveable city, green buildings, green environment and climate change. These key technologies generate related issues such as flash floods, environmental pollution, high oil price and escalating health care cost. Technology is not a panacea to all problems and thus, the course will consider catastrophic accidents in technology if the latter does not take into account systems considerations across different technology disciplines, or even society.

Besides acquiring the systems concept of the dynamic relationship between technology and society, students will be able to grasp the balanced concept on business profitability pertaining to the triple bottom line.

Topics:

- History of Technology
- Technological Discoveries in the Western World
- Energy
- Water
- Computer Revolution
- Human Health and Welfare
- Nanotechnology
- Population
- War, Politics, Culture and Technology
- Technology of the Future
- Ecology
- Environmental Sustainability, Industry and the Government

Learning Outcome:

- Comment on the history of technology in the development of human civilisation.
- Discuss major technologies that have shaped society.
- Show key instances where society has shaped technology.
- Identify industries that have changed significantly in the past two decades because of changes in technology.
- Relate the concept of sustainable development to technologies that could meet current and future human needs.
- Examine industrial ecology that encompasses sustainable business and technology methods in creating green products.
- Appraise critically the different technologies at different scale of analysis (from local to global explanations) that impact on society.
- Develop teamwork spirit through class group discussions and video blog discussion.

Continuous Assessment Component	**Weightage (%)**
PRE-COURSE QUIZ	3
PRE-COURSE QUIZ	3
PRE-COURSE QUIZ	3
PRE-COURSE QUIZ	3
PRE-COURSE QUIZ	4
PRE-COURSE QUIZ	4
GROUP BASED ASSIGNMENT	20
TUTOR-MARKED ASSIGNMENT	20
Sub-Total	**60**

Examinable Component	**Weightage (%)**
ECA	40
Sub-Total	**40**

Weightage Total	**100**