

Semester	1		
Course Code:	MA1100		
Course Name:	Ethics and Sustainability		
Credit Value	2 (Notional hours: 100)		
Pre-requisites	None		
Core /Optional	Compulsory		
Hourly Breakdown	Lecture (hrs)	Small-Group Discussions (hrs)	Independent Learning (hrs)
	15	15	70

Aim(s): To impart knowledge on basic concepts of sustainability and ethics.

Intended Learning Outcomes:

On completion of the course, students should be able to:

- **explain** the concept of morality and how it relates to standard ethical practices in the Education and Engineering Profession.
- **reflect** ethical conduct as a student and an engineering professional in contributing to decision-making in engineering activities.
- **interpret** the sustainability concepts and practices in different industrial sectors.
- **assess** the economic, social, and environmental impacts of development activities.

Course content:

- **Ethics and Morality:** Concept of morality; personal morality; common morality; core values.
- **Academic integrity:** Usage of information; citation and acknowledgement; plagiarism; impersonation.
- **Professional Ethics:** Engineers in an organization; introduction to IESL Code of Ethics.
- **Ethics and Sustainability:** Ethical considerations in decision making for sustainable development projects – application of IESL Code of Ethics.
- **Global environmental and social issues:** Global environmental issues with particular emphasis on global warming and resource limitation; Contribution from present development practices to these issues. Need for different approaches for development.
- **Concept of Sustainable Development:** Concept of sustainable development, three pillars of sustainability, the need for a sustainable approach to development, Sustainable development goals (SDGs).
- **Introduction to Tools and Concepts for sustainable development of Industries:** Concepts of Life Cycle Thinking, design for sustainability, cleaner production, sustainable consumption and production, circular economy

Teaching/Learning Methods:

Lectures
Student Based Activities

Assessment Strategy

Continuous Assessments 60%	Final Assessment 40%		
Small Group Activities 40%	Theory	Practical	Other
Quizzes 20%	40%	-	-

Recommended Reading:

- Harris, C. E., Pritchard, M.S., Rabins, M.J. (2009) *Engineering Ethics: Concepts and Cases*, Wadsworth Cengage Learning, USA.
- Kelly, W. E., Luke, B., Wright, R.N. (2017). *Engineering for Sustainable Communities- Principles and Practices*, ASCE Press.
- Martin, M. W., Schinzinger, R. (2010). *Introduction to Engineering Ethics*, McGraw-Hill, USA.
- Robertson, M. (2017). *Sustainability Principles and Practice*, Routledge, UK.
- The Institution of Engineers Sri Lanka. (2017). Code of Ethics, The Institution of Engineers Sri Lanka.
- Whitbeck, C. (2011). *Ethics in Engineering Practice and Research*, Cambridge University Press.