

CP551 Course Information (June to Oct 2019)

– a general elective course offered by the Department of C&P Engineering

<i>Course Venue:</i>	Seminar Room at the Department of Chemical and Process Engineering
<i>Time:</i>	14.00 pm to 17.00 pm on Mondays starting from 10 June 2019
<i>Coordinator and Lecturer:</i>	Prof. R. Shanthini
<i>Evaluation Panel:</i>	Prof. R. Shanthini and Ms. A.M. Wasantha Menike
<i>Course Website:</i>	http://rshanthini.com/sustainability (under construction); Also https://feels.pdn.ac.lk/course/view.php?id=51
<i>Contact Email:</i>	admin@rshanthini.com
<i>Contact Phone Number:</i>	071-53 268 35

Aim:

To provide basic and fundamental knowledge on sustainable development concepts so as to enable students to apply those concepts in different engineering disciplines.

Intended Learning Outcomes (ILOs):

At the completion of the course students should be able

- to identify (technical, political or social) systems contributing primarily towards economical development and requiring enhancement of social and ecological components of sustainable development (ILO 1),
- to critically analyse any system for its contribution towards sustainable development taking a holistic approach (ILO 2)
- to suggest creative (out-of-the-box) means and ways to enhance sustainable development inclusive of paradigm shift (ILO 3)
- to form views and opinions on solid ground (ILO 4), and
- to collect authentic information from available literature (ILO 5).

Course Content:

CP551 Sustainable Development* (03 credits)		
Pre-requisites: none		
Course Description	Time (hours)	
	Lectures	Project
Module 1: Components of sustainable development: environment, economy and society. Games and group discussions to introduce the need for sustainable development in today's world.	03	
Module 2: Concepts of economic development and human development. Economic development indices and their critique. Human development index and its critique. Discussion on sustainable development indices.	03	
Module 3: Group discussion on economic development, and the impact on public health and environment.	03	
Module 4: Group discussion on climate change and development, and other environmental and ecological related issues in today's world.	03	
Module 5: Science, technology, innovations and sustainable development.	03	
Module 6: Energy and transport for economic development and human development, and their impact on sustainable development.	03	
Module 7: Industrial and service sector and their impact on sustainable development.	03	
Module 8: Use of fertilizers and pesticides, green revolution and agricultural biotechnology in the agricultural sector, and their impact on sustainable development.	03	
Module 9: Globalization and its impact on sustainable development.	03	
Module 10: Information and communication technology and its impact on sustainable development.	03	
Sustainable development project execution, report writing and assessment.		30
TOTAL (equivalent hours)	30	15

*CP551 belongs to the political and social sciences category of general electives.

Method of Assessment:

Assessment	Percentage marks
Continuous Assessments (Project)	50
End-semester Examination	50