ENGR 4034 CLIMATE SMART ENGINEERING

Credit Points 10

Legacy Code 301420

Coordinator Sathaa Arumugam Sathasivan (https://directory.westernsydney.edu.au/search/name/Sathaa Arumugam Sathasivan/)

Description Climate change is one of the most significant and urgent challenges facing the world today. In this unit, students will learn and appropriately apply scientific principles, in an engineering context, to reduce our impact on climate as well as in adopting to changing climate conditions. Students will explore both current and emerging technologies, that address climate change, in order to propose workable real world solutions.

School Eng, Design & Built Env

Discipline Engineering and Related Technologies, Not Elsewhere Classified.

Student Contribution Band HECS Band 2 10cp

Check your fees via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 4 subject

Learning Outcomes

On successful completion of this subject, students should be able to:

1. Evaluate designs for climate smartness.
2. Design geoengineering approaches and explain the working principles.
3. Design three climate proof systems/infrastructure and explain the working principles.
4. Develop a comprehensive plan to improve climate smartness of a chosen product, infrastructure or system and communicate to technical and non-technical audience.

Subject Content

1.Climate change and its relation to the technology
2.Geoengineering ? emission reduction, carbon sequestration, forest expansion, orbital mirrors, sunshades etc.
3.Design of climate proof systems ? transport, building, water supply systems, agriculture, water resources etc.

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/ Group Task
Quiz	30 minutes	15	N	Individual
Simulation	2000-2500 words and 10 minutes presentation per student	40	N	Both (Individual & Group)
Final Exam	2 hours	45	Y	Individual