

Course Outline (Higher Education)

School:	School of Health and Life Sciences
Course Title:	SOIL SCIENCE
Course ID:	ENVGC2747
Credit Points:	15.00
Prerequisite(s):	Nil
Co-requisite(s):	Nil
Exclusion(s):	Nil
ASCED:	010709

Description of the Course :

Topics include the nature of soil, its formation and classification; physical, chemical, and biological properties of soil; soil organic matter; chemistry of the nutrients in soil including ion exchange, ion sorption, redox potential; environmental impact of soil salinity, acidity and soil erosion and their management practices; effect of human inputs and activities on soils including agrochemicals, agricultural and industrial wastes and pollutants.

Grade Scheme: Graded (HD, D, C, etc.)

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the course but gained a final mark of 45 per cent or above and submitted all major assessment tasks..

Learning Outcomes:

On completion of this unit students will be able to:

1. Describe the fundamental properties of soil and its composition;
2. Explain the role of physical, chemical and biological properties of soil in maintaining soil fertility;
3. Summarise the chemistry of essential plant nutrients including N, P, K, and trace metals;
4. Give selected examples of the biotransformation of plant nutrients;
5. Discuss environmental and resource issues relevant to soil including acidity, salinity, soil erosion, chemical pollution, soil management practices and effects of human inputs to soil;
6. Use selected laboratory and field techniques to assess soil chemical and physical properties.

Course Content:

Values and Graduate Attributes:

Learning Task and Assessment:

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Learning Outcomes Assessed	Learning Tasks	Assessment Type	Weighting
Written examination	Written examination	Written examination	60%
Written assignments/field excursion report	Written assignments/field excursion report	Written assignments/field excursion report	15%
Laboratory work	Laboratory work	Laboratory work	25%

Adopted Reference Style: