Advanced Soil Conservation

Course Outline

The course is offered as 3 separate, but sequential, 5-credit modules and will provide the student with the knowledge and integrated skills to produce a NZ industry-standard, farm-scale, land and water management plan. This plan will correctly identify existing and potential soil and nutrient loss pathways, the causes of these losses, and provide justification for a range of mitigation options.

Controller: Fertilizer and Lime Research Centre (Massey University)

Updated March 2018

Module 2 – Soil and Nutrient Loss Processes

Availability: Enrolment will be offered periodically as demand dictates.

Location: Online study.

Delivery mode: The module will be delivered through online distance learning. The module system is intended to allow more flexible learning, particularly for employed professionals.

Aim: In this module, students will analyse the physical and chemical processes that underlie soil, nutrient, and pathogen loss, and use the tools and data available to characterise and quantify these losses at a catchment scale. This knowledge, as well as simple financial tools, will be used to justify the use of particular mitigation options applied to a case study farm.

Entry requirements: The module is suited to students or professionals holding a Bachelor's degree, preferably with qualifications in soil science and with an interest in land and water management. Prerequisites to undertake Module 2 include successful completion of Module 1 and the Intermediate Sustainable Nutrient Management course offered by FLRC (Massey University) OR Module 1 and a relevant level 1 course in Soil Science.

Workload: Approximately 50 hours of online study and technical assessments.

Learning outcomes:

1. Demonstrate an understanding of the physical and chemical processes, and farm management practices, that induce erosion, sediment, nutrient, and pathogen loss.
2. Identify opportunities for attenuation and mitigation using tools, databases, and appropriate data scale and quality, in order to quantify farm and catchment scale sediment, nutrient and pathogen loss.

Certification: Successful participants will receive a Massey University 'Certificate of Completion' in Advanced Soil Conservation - Module 2 Soil and Nutrient Loss Processes' and have their achievement and 5 credits added to the academic records at Massey University.

Assessment:

	Assessment type*	Assessment Title	Weighting (%)	Link to Learning Outcomes
1	Written Assessment	Report, Technical	40	Module 2 LO 1
2	Written Assessment	Report, Technical	60	Module 2 LO 1,2

Requirements to successfully complete the paper:

Achieve an overall minimum of 50% in the assessments.

Credit to other tertiary Qualifications:

The 'Certificate of Completion' is a recognised University achievement. A student may wish to have the work completed on this course credited towards a postgraduate paper in Soil Science offered by Massey University. This can be achieved by enrolling in the appropriate paper and applying for credit to the course controller for the work completed in this short course.
