MI204: Microbes and the Environment
Credit weighting: 5 ECTS

MI204 is a lecture only module held during Semester 2. Continuous assessment in the form of MCQ tests are worth 20% of marks, with a formal 2 hour written exam at the end of Semester 2 accounting for the remaining 80% of marks.

Module Description:
This module aims to give students an understanding of the key medical and environmental impacts of microorganisms. The unit will be delivered as a series of 24 lectures covering background on microbial classification, microbial genetics and metabolic diversity, biogeochemical cycling, waste treatment systems, the role of microbes and viruses in human and animal diseases. The role of the host immune system and commensal microflora in protecting against infection will also be covered.

Learning Outcomes
On successful completion of this module the learner will be able to:

LO1 Identify the main domain of life on a phylogenetic tree based on ribosomal RNA sequences.
LO2 Describe the main systems used to classify microorganisms
LO3 Differentiate between the main metabolic strategies used by microorganisms in the biosphere
LO4 Describe some key biogeochemical cycles and discuss the harnessing of microbial metabolism in
environmental biotechnologies.
LO5 Discuss the different microbe-based strategies used for waste management and biofuel production
LO6 Describe the basic elements of the human immune system
LO7 Describe the role of specific microbes in human and animal diseases
LO8 Describe the life cycle of a typical animal virus