## CS00 - BSc Honours Microbiology

### A: Upon successful completion of this module, the graduates in zoology will be able to demonstrate a systematic understanding of:

Methods for acquiring, interpreting and analysing biological information through the study of texts, original reports and data sets.

The taxonomy, structure and, where appropriate, life-cycle of representative groups of bacteria, viruses and eukaryotic microorganisms.

The physiology of microorganisms, in terms of the properties of both individual cells and populations, including their adaptation to diverse environmental conditions.

The genome structure, mechanisms of gene expression, regulation and effect on metabolism.

The interaction of microorganisms with higher organisms with particular regard to disease.

The importance of microorganisms in environmental processes.

The exploitation of microorganisms in biotechnological processes.

The relationship between molecular and cellular processes, and evolutionary biology.

### B: Upon successful completion of this module students will be able to:

Apply the methods and techniques learned to review, extend and apply knowledge and understanding to initiate and carry out projects.

Evaluate evidence, arguments and assumptions to reach sound judgements to achieve a solution, or range of solutions, to a problem.

### C: Upon successful completion of this module students will:

Be able to plan and execute all the core practical and professional skills relevant to first post-employment in the discipline, independently.

Be fully aware of relevant ethical implications of proposed courses of actions or situations and take the necessary steps to work within the limits of these.

### D: Upon successful completion of this module students will be able to demonstrate qualities and transferrable skills needed for employment. In particular, they will be able to demonstrate:

- Initiative
- Personal responsibility
- Decision-making in complex & unpredictable circumstances;
- Problem solving skills that can be applied in many types of employment;
- Lifelong learning skills to address their own learning needs within their discipline and new areas of learning;
- Communicate effectively and confidently to both specialist & non-specialist audiences.