

University of Pretoria Yearbook 2017

Introduction to proteins and enzymes 251 (BCM 251)

Qualification	Undergraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	12.00
Programmes	BDietetics BSc Biochemistry BSc Biotechnology BSc Chemistry BSc Culinary Science BSc Ecology BSc Entomology BSc Food Science BSc Genetics BSc Human Genetics BSc Human Physiology BSc Human Physiology, Genetics and Psychology BSc Medical Sciences BSc Microbiology BSc Nutrition BSc Plant Science BSc Zoology BScAgric Animal and Pasture Science BScAgric Animal Science BScAgric Applied Plant and Soil Sciences BScAgric Plant Pathology
Service modules	Faculty of Health Sciences
Prerequisites	[CMY117 GS] and [CMY127 GS] and [MLB111 GS]
Contact time	2 lectures per week, 90 minute practical per week

Language of tuition	Afrikaans and English is used in one class
Academic organisation	Biochemistry
Period of presentation	Semester 1

Module content

Structural and ionic properties of amino acids. Peptides, the peptide bond, primary, secondary, tertiary and quaternary structure of proteins. Interactions that stabilise protein structure, denaturation and renaturation of proteins. Introduction to methods for the purification of proteins, amino acid composition, and sequence determinations. Introduction to enzyme kinetics and enzyme inhibition. Allosteric enzymes, regulation of enzyme activity, active centres and mechanisms of enzyme catalysis. Examples of industrial applications of enzymes. Practical training in laboratory techniques and Good Laboratory Practice. Techniques for the quantitative and qualitative analysis of biological molecules. Processing and presentation of scientific data.

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