

University of Pretoria Yearbook 2022

Lipid and nitrogen metabolism 261 (BCM 261)

Qualification	Undergraduate
Faculty	Faculty of Natural and Agricultural Sciences
Module credits	12.00
NQF Level	06
Programmes	BSc (Biochemistry)
	BSc (Biotechnology)
	BSc (Chemistry)
	BSc (Culinary Science)
	BSc (Entomology)
	BSc (Food Science)
	BSc (Genetics)
	BSc (Human Genetics)
	BSc (Human Physiology)
	BSc (Medical Sciences)
	BSc (Microbiology)
	BSc (Nutrition)
	BSc (Plant Science)
	BSc (Zoology)
	BScAgric (Animal Science)
Service modules	Faculty of Health Sciences
Prerequisites	BCM 251 GS and BCM 257 GS.
Contact time	1 tutorial per week, 2 lectures per week
Language of tuition	Module is presented in English
Department	Biochemistry, Genetics and Microbiology
Period of presentation	Semester 2

Module content

Biochemistry of lipids, membrane structure, anabolism and catabolism of lipids. Total ATP yield from the complete catabolism of lipids. Electron transport chain and energy production through oxidative phosphorylation. Nitrogen metabolism, amino acid biosynthesis and catabolism. Biosynthesis of neurotransmitters, pigments, hormones and nucleotides from amino acids. Catabolism of purines and pyrimidines. Therapeutic agents directed against nucleotide metabolism. Examples of inborn errors of metabolism of nitrogen containing compounds. The urea cycle, nitrogen excretion. Online activities include training in scientific reading skills; evaluation of a scientific report; techniques for separation analysis and visualisation of biological molecules; hypothesis design and testing, method design and scientific controls.

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