

# University of Pretoria Yearbook 2022

## Lipid and nitrogen metabolism 261 (BCM 261)

<b>Qualification</b>	Undergraduate
<b>Faculty</b>	Faculty of Natural and Agricultural Sciences
<b>Module credits</b>	12.00
<b>NQF Level</b>	06
<b>Programmes</b>	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)
<b>Service modules</b>	Faculty of Health Sciences
<b>Prerequisites</b>	BCM 251 GS and BCM 257 GS.
<b>Contact time</b>	1 tutorial per week, 2 lectures per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Biochemistry, Genetics and Microbiology
<b>Period of presentation</b>	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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