



# University of Pretoria Yearbook 2022

## Carbohydrate metabolism 252 (BCM 252)

<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>	BDietetics BSc (Biochemistry) BSc (Biotechnology) BSc (Chemistry) BSc (Culinary Science) 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 Science)
<b>Service modules</b>	Faculty of Education 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

Carbohydrate structure and function. Blood glucose measurement in the diagnosis and treatment of diabetes. Bioenergetics and biochemical reaction types. Glycolysis, gluconeogenesis, glycogen metabolism, pentose phosphate pathway, citric acid cycle and electron transport. Total ATP yield from the complete oxidation of glucose. A comparison of cellular respiration and photosynthesis. Online activities include techniques for the study and analysis of metabolic pathways and enzymes; PO ratio of mitochondria, electrophoresis, extraction, solubility and gel permeation techniques; scientific method and design.

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