

University of Pretoria Yearbook 2020

Carbohydrate metabolism 252 (BCM 252)

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 BSc Medical Sciences BSc Medical Sciences BSc Microbiology BSc Nutrition BSc Plant Science BSc Soology BSc Nutrition BSc Plant Science BSc Zoology BSc Animal Science BSc Zoology BSc Plant Science BSc Zoology BSc Microbiology BSc Microbiology BSc Microbiology BSc Nutrition BSc Plant Science BSc Zoology BScAgric Animal Science BSc Zoology BScAgric Animal Science Service modules Faculty of Education Faculty of Health Sciences Prerequisites CMY 117 GS and CMY 127 GS and MLB 111 GS Contact time 1 tutorial per week, 2 lectures per week Language of tuition Module is presented in English Department Biochemistry, Genetics and Microbiology	Qualification	Undergraduate
Programmes BSc Biotechnology BSc Biotechnology BSc Chemistry BSc Chemistry BSc Collinary Science BSc Ecology BSc Entomology BSc Food Science BSc Genetics BSc Human Genetics BSc Human Physiology BSc Human Physiology BSc Medical Sciences BSc Microbiology BSc Microbiology BSc Nutrition BSc Plant Science BSc Plant Science BSc Zoology BSc Zoology BSc Animal Science Service modules Faculty of Education Faculty of Health Sciences Prerequisites CMY 117 GS and CMY 127 GS and MLB 111 GS Contact time 1 tutorial per week, 2 lectures per week Language of tuition Module is presented in English Department Biochemistry, Genetics and Microbiology	Faculty	Faculty of Natural and Agricultural Sciences
BSC Biochemistry BSC Chemistry BSC Chemistry BSC Culinary Science BSC Ecology BSC Entomology BSC Food Science BSC Genetics BSC Human Genetics BSC Human Physiology BSC Human Physiology BSC Human Physiology BSC Medical Sciences BSC Microbiology BSC Microbiology BSC Microbiology BSC Microbiology BSC Nutrition BSC Plant Science BSC Zoology BSC Animal Science BSC Zoology BSC	Module credits	12.00
BSc Chemistry BSc Culinary Science BSc Ecology BSc Entomology BSc Entomology BSc Genetics BSc Genetics BSc Human Genetics BSc Human Physiology BSc Human Physiology BSc Medical Sciences BSc Microbiology BSc Microbiology BSc Nutrition BSc Plant Science BSc Nutrition BSc Plant Science BSc Nutrition BSc Plant Science BSc Nutrition BSc Plant Science BSc Zoology BSc Agric Animal Science BSc Agric Animal Science Service modules Faculty of Health Sciences Prerequisites CMY 117 GS and CMY 127 GS and MLB 111 GS Contact time 1 tutorial per week, 2 lectures per week Language of tuition Module is presented in English Department	Programmes	BDietetics
BSc Chemistry BSc Culinary Science BSc Ecology BSc Entomology 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 Microbiology BSc Nutrition BSc Plant Science BSc Zoology BSc Animal Science BSc Zoology BScAgric Animal Science Service modules Faculty of Education Faculty of Health Sciences Prerequisites CMY 117 GS and CMY 127 GS and MLB 111 GS Contact time 1 tutorial per week, 2 lectures per week Language of tuition Module is presented in English Department		BSc Biochemistry
BSc Ecology BSc Entomology BSc Food Science BSc Genetics BSc Human Genetics BSc Human Physiology BSc Human Physiology BSc Medical Sciences BSc Microbiology BSc Microbiology BSc Nutrition BSc Plant Science BSc Zoology BScAgric Animal Science Service modules Faculty of Education Faculty of Health Sciences Prerequisites CMY 117 GS and CMY 127 GS and MLB 111 GS Contact time 1 tutorial per week, 2 lectures per week Language of tuition Module is presented in English Department Bisc Plant Science and Microbiology		BSc Biotechnology
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 BSc Zoology BScAgric Animal Science Service modules Faculty of Education Faculty of Health Sciences Contact time 1 tutorial per week, 2 lectures per week Language of tuition Module is presented in English Department		BSc Chemistry
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 Plant Science BSc Zoology BSc Agric Animal Science Service modules Faculty of Education Faculty of Health Sciences Prerequisites CMY 117 GS and CMY 127 GS and MLB 111 GS Contact time 1 tutorial per week, 2 lectures per week Language of tuition Module is presented in English Department Biochemistry, Genetics and Microbiology		BSc Culinary Science
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 BSc Animal Science BSc Zoology BScAgric Animal Science Service modules Faculty of Education Faculty of Health Sciences Prerequisites CMY 117 GS and CMY 127 GS and MLB 111 GS Contact time 1 tutorial per week, 2 lectures per week Language of tuition Module is presented in English Department Biochemistry, Genetics and Microbiology		BSc Ecology
BSc Human Genetics BSc Human Physiology BSc Human Physiology, Genetics and Psychology BSc Medical Sciences BSc Microbiology BSc Medical Sciences BSc Microbiology BSc Nutrition BSc Plant Science BSc Zoology BScAgric Animal Science Service modules Faculty of Education Faculty of Health Sciences Prerequisites CMY 117 GS and CMY 127 GS and MLB 111 GS Contact time 1 tutorial per week, 2 lectures per week Language of tuition Module is presented in English Department Biochemistry, Genetics and Microbiology		BSc Entomology
BSc Human Genetics BSc Human Physiology BSc Human Physiology, Genetics and Psychology BSc Medical Sciences BSc Microbiology BSc Nutrition BSc Plant Science BSc Zoology BSc Zoology BScAgric Animal Science Service modules Faculty of Education Faculty of Health Sciences Prerequisites CMY 117 GS and CMY 127 GS and MLB 111 GS Contact time 1 tutorial per week, 2 lectures per week Language of tuition Module is presented in English Department Biochemistry, Genetics and Microbiology		BSc Food Science
BSc Human Physiology BSc Human Physiology, Genetics and Psychology BSc Medical Sciences BSc Microbiology BSc Nutrition BSc Plant Science BSc Zoology BSc Animal Science BSc Apric Animal Science Service modules Faculty of Education Faculty of Health Sciences Prerequisites CMY 117 GS and CMY 127 GS and MLB 111 GS Contact time 1 tutorial per week, 2 lectures per week Language of tuition Module is presented in English Department Biochemistry, Genetics and Microbiology		BSc Genetics
BSc Human Physiology, Genetics and Psychology BSc Medical Sciences BSc Microbiology BSc Nutrition BSc Plant Science BSc Zoology BScAgric Animal Science Service modules Faculty of Education Faculty of Health Sciences Prerequisites CMY 117 GS and CMY 127 GS and MLB 111 GS Contact time 1 tutorial per week, 2 lectures per week Language of tuition Module is presented in English Department Biochemistry, Genetics and Microbiology		BSc Human Genetics
BSc Medical Sciences BSc Microbiology BSc Nutrition BSc Plant Science BSc Zoology BScAgric Animal Science Service modules Faculty of Education Faculty of Health Sciences Prerequisites CMY 117 GS and CMY 127 GS and MLB 111 GS Contact time 1 tutorial per week, 2 lectures per week Language of tuition Module is presented in English Department Biochemistry, Genetics and Microbiology		BSc Human Physiology
BSc Microbiology BSc Nutrition BSc Plant Science BSc Zoology BScAgric Animal Science Service modules Faculty of Education Faculty of Health Sciences Prerequisites CMY 117 GS and CMY 127 GS and MLB 111 GS Contact time Language of tuition Module is presented in English Department Biochemistry, Genetics and Microbiology		BSc Human Physiology, Genetics and Psychology
BSc Nutrition BSc Plant Science BSc Zoology BScAgric Animal Science Service modules Faculty of Education Faculty of Health Sciences Prerequisites CMY 117 GS and CMY 127 GS and MLB 111 GS Contact time 1 tutorial per week, 2 lectures per week Language of tuition Module is presented in English Department Biochemistry, Genetics and Microbiology		BSc Medical Sciences
BSc Plant Science BSc Zoology BScAgric Animal Science Service modules Faculty of Education Faculty of Health Sciences Prerequisites CMY 117 GS and CMY 127 GS and MLB 111 GS Contact time 1 tutorial per week, 2 lectures per week Language of tuition Module is presented in English Department Biochemistry, Genetics and Microbiology		BSc Microbiology
BSc Zoology BScAgric Animal Science Service modules Faculty of Education Faculty of Health Sciences Prerequisites CMY 117 GS and CMY 127 GS and MLB 111 GS Contact time 1 tutorial per week, 2 lectures per week Language of tuition Module is presented in English Department Biochemistry, Genetics and Microbiology		BSc Nutrition
Service modules Faculty of Education Faculty of Health Sciences Prerequisites Contact time Language of tuition Module is presented in English Department Biochemistry, Genetics and Microbiology		BSc Plant Science
Faculty of Education Faculty of Health Sciences Prerequisites CMY 117 GS and CMY 127 GS and MLB 111 GS Contact time 1 tutorial per week, 2 lectures per week Language of tuition Module is presented in English Department Biochemistry, Genetics and Microbiology		BSc Zoology
Prerequisites CMY 117 GS and CMY 127 GS and MLB 111 GS Contact time 1 tutorial per week, 2 lectures per week Language of tuition Module is presented in English Department Biochemistry, Genetics and Microbiology		BScAgric Animal Science
Prerequisites CMY 117 GS and CMY 127 GS and MLB 111 GS Contact time 1 tutorial per week, 2 lectures per week Language of tuition Module is presented in English Department Biochemistry, Genetics and Microbiology	Service modules	Faculty of Education
Contact time 1 tutorial per week, 2 lectures per week Language of tuition Module is presented in English Department Biochemistry, Genetics and Microbiology		Faculty of Health Sciences
Language of tuitionModule is presented in EnglishDepartmentBiochemistry, Genetics and Microbiology	Prerequisites	CMY 117 GS and CMY 127 GS and MLB 111 GS
Department Biochemistry, Genetics and Microbiology	Contact time	1 tutorial per week, 2 lectures per week
	Language of tuition	Module is presented in English
Period of presentation Semester 1	Department	Biochemistry, Genetics and Microbiology
2	Period of presentation	Semester 1



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. Practical 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.

The information published here is subject to change and may be amended after the publication of this information. The General Regulations (G Regulations) apply to all faculties of the University of Pretoria. It is expected of students to familiarise themselves well with these regulations as well as with the information contained in the General Rules section. Ignorance concerning these regulations and rules will not be accepted as an excuse for any transgression.