

# University of Pretoria Yearbook 2021

## Molecular and cell biology 111 (MLB 111)

**Qualification** Undergraduate

**Faculty** Faculty of Natural and Agricultural Sciences

**Module credits** 16.00

**NQF Level** 05

**Programmes** BEd Senior Phase and Further Education and Training Teaching

BSc Computer Science

BSc Information and Knowledge Systems

BChD

BDietetics

MBChB

BSc Biochemistry

BSc Biological Sciences

BSc Biotechnology

BSc Chemistry

BSc Culinary Science

BSc Ecology

BSc Entomology

BSc Food Science

BSc Genetics

BSc Geography and Environmental Science

BSc Human Genetics

BSc Human Physiology

BSc Human Physiology, Genetics and Psychology

BSc Medical Sciences

BSc Microbiology

BSc Nutrition

BSc Physics

BSc Plant Science

BSc Zoology

BScAgric Agricultural Economics and Agribusiness Management

BScAgric Animal Science

BScAgric Applied Plant and Soil Sciences

BScAgric Plant Pathology

BVSc

**Service modules** Faculty of Engineering, Built Environment and Information Technology

Faculty of Education

Faculty of Health Sciences

Faculty of Veterinary Science

**Prerequisites** A candidate who has passed Mathematics with at least 60% in the Grade 12 examination

**Contact time** 1 practical/tutorial per week, 4 lectures per week

**Language of tuition** Module is presented in English

**Department** Biochemistry, Genetics and Microbiology

**Period of presentation** Semester 1

### Module content

Introduction to the molecular structure and function of the cell. Basic chemistry of the cell. Structure and composition of prokaryotic and eukaryotic cells. Ultrastructure and function of cellular organelles, membranes and the cytoskeleton. General principles of energy, enzymes and cell metabolism. Selected processes, e.g. glycolysis, respiration and/or photosynthesis. Introduction to molecular genetics: DNA structure and replication, transcription, translation. Cell growth and cell division.

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