

# University of Pretoria Yearbook 2025

# Bacteriology 251 (MBY 251)

| FacultyFaculty of Natural and Agricultural SciencesModule credits12.00NQF Level06ProgrammesBSc in Information Technology in Information and Knowledge SystemsBSc in BiotehmistryBSc in BiotehmologyBSc in BiotehmologyBSc in ChemistryBSc in ChemistryBSc in ChemistryBSc in Chemistry 4-year programmeBSc in Chemistry 4-year programmeBSc in EcologyBSc in Ecology 4-year programmeBSc in Ecology 4-year programmeBSc in Food Management specialising in Culinary ScienceBSc in Food ScienceBSc in GeneticsBSc in GeneticsBSc in GeneticsBSc in Human GeneticsBSc in Human GeneticsBSc in Human GeneticsBSc in Human GeneticsBSc in Medical ScienceBSc in Medical ScienceBSc in NethologyBSc in InteractionageBSc in NethologyBSc in Plant ScienceBSc in InteractionageBSc in NethologyBSc in Plant ScienceBSc in InteractionageBSc in NethologyBSc in Plant ScienceBSc in Plant ScienceBSc in Plant ScienceBSc in Plant ScienceBSc in InteractionageBSc in Plant ScienceBSc in ZoologyBSc in ZoologyBSc in IPlant Pathology 5-year programmeService modulesFaculty of Engineering, Built Environment and Information TechnologyPrerequisitesMBY 161 GSContact time2 lectures per week, fortnightly practicals  | Qualification   | Undergraduate  |
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| NQF Level06ProgrammesB5c in Information Technology in Information and Knowledge SystemsB5c in BiochemistryB5c in BiotechnologyB5c in ChemistryB5c in Chemistry 4-year programmeB5c in Chemistry 4-year programmeB5c in EcologyB5c in Ecology 4-year programmeB5c in Ecology 4-year programmeB5c in Food Management specialising in Culinary ScienceB5c in GeneticsB5c in GeneticsB5c in Geography option Geography and Environmental ScienceB5c in Human GeneticsB5c in Human PhysiologyB5c in MicrobiologyB5c in MicrobiologyB5c in MicrobiologyB5c in MicrobiologyB5c in Pology 4-year programmeB5c in MicrobiologyB5c in MicrobiologyB5c in Plant ScienceB5c in ScienceB5c in Human Physiology 4-year programmeB5c in MicrobiologyB5c in MicrobiologyB5c in Plant ScienceB5c in MicrobiologyB5c in ZoologyB5c in Plant PathologyB5crixe modulesFaculty of Engineering, Built Environment and Information TechnologyPrerequisitesB5C Price modulesPrerequisitesB5C Price modulesB5C Price modulesB5C Price modulesB5C Price ModulesB5C Price ProgrammeB5C Price Programm  | Faculty         | Faculty of Natural and Agricultural Sciences                         |
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| Prerequisites MBY 161 GS  |                 | BScAgric in Plant Pathology 5-year programme                         |
|   | Service modules | Faculty of Engineering, Built Environment and Information Technology |
| Contact time     2 lectures per week, fortnightly practicals  | Prerequisites   | MBY 161 GS   |
|   | Contact time    | 2 lectures per week, fortnightly practicals                          |



| Language of tuition    | Module is presented in English          |
|------------------------|---|
| Department             | Biochemistry, Genetics and Microbiology |
| Period of presentation | Semester 1                              |

## **Module content**

Growth, replication and survival of bacteria, Energy sources, harvesting from light versus oxidation, regulation of catabolic pathways, chemotaxis. Nitrogen metabolism, iron-scavenging. Alternative electron acceptors: denitrification, sulphate reduction, methanogenesis. Bacterial evolution, systematic and genomics. Biodiversity; bacteria occurring in the natural environment (soil, water and air), associated with humans, animals, plants, and those of importance in foods and in the water industry.

### **General Academic Regulations and Student Rules**

The General Academic Regulations (G Regulations) and General Student Rules apply to all faculties and registered students of the University, as well as all prospective students who have accepted an offer of a place at the University of Pretoria. On registering for a programme, the student bears the responsibility of ensuring that they familiarise themselves with the General Academic Regulations applicable to their registration, as well as the relevant faculty-specific and programme-specific regulations and information as stipulated in the relevant yearbook. Ignorance concerning these regulations will not be accepted as an excuse for any transgression, or basis for an exception to any of the aforementioned regulations. The G Regulations are updated annually and may be amended after the publication of this information.

### Regulations, degree requirements and information

The faculty regulations, information on and requirements for the degrees published here are subject to change and may be amended after the publication of this information.

### University of Pretoria Programme Qualification Mix (PQM) verification project

The higher education sector has undergone an extensive alignment to the Higher Education Qualification Sub-Framework (HEQSF) across all institutions in South Africa. In order to comply with the HEQSF, all institutions are legally required to participate in a national initiative led by regulatory bodies such as the Department of Higher Education and Training (DHET), the Council on Higher Education (CHE), and the South African Qualifications Authority (SAQA). The University of Pretoria is presently engaged in an ongoing effort to align its qualifications and programmes with the HEQSF criteria. Current and prospective students should take note that changes to UP qualification and programme names, may occur as a result of the HEQSF initiative. Students are advised to contact their faculties if they have any questions.