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# University of Pretoria Yearbook 2022

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## BScHons *Microbiology* (02240601)

**Department** Genetics

**Minimum duration of study** 1 year

**Total credits** 135

**NQF level** 08

### Admission requirements

1. Relevant BSc degree
2. A weighted average of at least 60% in Microbiology at final-year level
3. Genetic Manipulation of Microbes (or equivalent) passed at final-year level

Note: Additional modules may be required in order to reach the desired level of competency

## Curriculum: Final year

**Minimum credits: 135**

### Additional information:

Suitably qualified candidates may also apply for the interdepartmental BScHons Biotechnology (Code 02240393) with a registration in the Division of Microbiology. For more information, please refer to the programme information for the BScHons Biotechnology.

## Core modules

### Research methods 751 (MCP 751)

|                               |  |
|-------------------------------|--|
| <b>Module credits</b>         | 25.00                                    |
| <b>NQF Level</b>              | 08                                       |
| <b>Prerequisites</b>          | No prerequisites.                        |
| <b>Contact time</b>           | 2 Practicals/Discussion classes per week |
| <b>Language of tuition</b>    | Module is presented in English           |
| <b>Department</b>             | Biochemistry, Genetics and Microbiology  |
| <b>Period of presentation</b> | Year                                     |

#### Module content

The module provides students with planning, data handling, writing, and presentation skills required for microbiological research. In addition, students are provided with hands-on experience in the advanced techniques utilised in research and analysis.

### Scientific communication 752 (MCP 752)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 15.00   |
| <b>NQF Level</b>              | 08  |
| <b>Prerequisites</b>          | No prerequisites.                               |
| <b>Contact time</b>           | 1 discussion class per week, 1 seminar per week |
| <b>Language of tuition</b>    | Module is presented in English                  |
| <b>Department</b>             | Biochemistry, Genetics and Microbiology         |
| <b>Period of presentation</b> | Year  |

#### Module content

Students are guided to collect relevant literature from disparate papers in the broader field of Microbiology and to condense and collate this into a written seminar, which is also presented verbally.

### Trends in microbiology 753 (MCP 753)

|                       |       |
|-----------------------|-------|
| <b>Module credits</b> | 20.00 |
| <b>NQF Level</b>      | 08    |



|                               |   |
|-------------------------------|---|
| <b>Prerequisites</b>          | No prerequisites.                       |
| <b>Contact time</b>           | 2 discussion classes per week           |
| <b>Language of tuition</b>    | Module is presented in English          |
| <b>Department</b>             | Biochemistry, Genetics and Microbiology |
| <b>Period of presentation</b> | Year                                    |

#### Module content

Discussions and essays focusing on recent advances in the field of Microbiology, as well as contextualising these developments within the broader framework of the biosciences and its role in the workplace and modern society. Ethical and philosophical issues in the broader field of Microbiology are also addressed.

### Research project and literature study 754 (MCP 754)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 60.00                                   |
| <b>NQF Level</b>              | 08                                      |
| <b>Prerequisites</b>          | No prerequisites.                       |
| <b>Language of tuition</b>    | Module is presented in English          |
| <b>Department</b>             | Biochemistry, Genetics and Microbiology |
| <b>Period of presentation</b> | Year                                    |

#### Module content

The module includes both practical and theoretical components. In addition to an individual research project with well-defined limits that is undertaken under the guidance of a lecturer, the module also acquaints the student with the theoretical aspects relevant to a specific research topic. The research project is thus preceded by the presentation of an in-depth review of the relevant literature, and the project is concluded with a progress report, presented in the format of a short publication and an oral presentation.

### Molecular and cellular biology 721 (MLB 721)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 15.00                                   |
| <b>NQF Level</b>              | 08                                      |
| <b>Prerequisites</b>          | No prerequisites.                       |
| <b>Contact time</b>           | 2 discussion classes per week           |
| <b>Language of tuition</b>    | Module is presented in English          |
| <b>Department</b>             | Biochemistry, Genetics and Microbiology |
| <b>Period of presentation</b> | Year                                    |

## Module content

Principles and applications of recombinant DNA, and other novel molecular and genomics technologies, to address questions in the biological sciences and/or biotechnology. Strong emphasis is placed on the principles of research planning, including identifying suitable research objectives, formulating a research strategy and understanding the relevance and feasibility of research. The module is assessed by means of a research project proposal, conceived and formulated by each student. The proposal must focus on the use of molecular technologies in addressing realistic questions in biology and/or biotechnology. There is also an oral defense of the project proposal.

This module is jointly presented in the Departments of Biochemistry, Genetics and Microbiology and Plant and Soil Sciences.

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

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.