

# University of Pretoria Yearbook 2020

## MSc Public Health (10253290)

**Minimum duration of study** 2 years

**Total credits** 180

**NQF level** 09

### Admission requirements

- A four-year bachelor's degree is required or an honours degree.
- In the case of a three-year bachelor's degree also applicable practical (work) experience as prescribed by the University plus any other additional work deemed necessary by the head of department:
- With the proviso that the head of department will have the discretion to decide whether the prerequisite qualification or the qualification plus work experience would be acceptable for admission to the proposed field of study.

### Additional requirements

All MSc students must register for, and attend (TNM 802) Applied research methodology 802 satisfactorily. (Exemption may be granted if the module has already been passed for the BScHons degree.) However, MSc(Pharmacology) students must register for FAR 872 instead of TNM 802.

Also consult General Regulations.

### Other programme-specific information

**Please note:** The choice of elective modules has to be approved by the supervisor.

Subject to the stipulations of the General Regulations, the Chairperson of the School may, in consultation with the relevant head of department, approve a fixed limited extension of the period on the grounds of extraordinary circumstances.

### Examinations and pass requirements

- i. The minimum pass mark for a module is 50%.
- ii. The prescribed modules must be passed independently of each other.
- iii. Second examinations in the modules are arranged by the relevant head of department, within a period of time specified by him or her.
- iv. No second examinations will be granted in modules in which less than 40% has been obtained. Instead, the module must be repeated in its entirety.
- v. Only with the approval of the Chairperson of the School, on the recommendation of the relevant head of department, will a student be allowed to continue his or her studies after having failed two modules (or the

same module twice).

## Research information

### Research protocol

After registration, a student is required to submit a complete research protocol regarding the proposed dissertation to the Academic Advisory Committee and if necessary, also to the Ethics Committee for approval.

### Dissertation

A dissertation on an approved research project must be passed in addition to the coursework. The stipulations of the General Regulations regarding the preparation and submission, the technical editing and the résumé of the dissertation apply.

A systematic literature review (Cochrane type) on an approved subject, which is undertaken in such a manner that bias is minimised, may be presented as an alternative to the dissertation for awarding the MSc degree, provided that the module CLI 870 Principles of clinical epidemiology has been successfully completed. It requires, inter alia, a research protocol with clearly formulated objectives and methods. Inclusion and exclusion methods for the study must be determined. Where applicable, the data must be summarised (meta analysis), with applicable statistical methods.

## Pass with distinction

The average mark of the modules, weighted in respect of the number of credits acquired for each individual module, will be the final mark (%) of the coursework.

The degree is conferred with distinction on a student who obtains an average mark of at least 75% in the coursework, as well as a final mark of at least 75% for the dissertation.

# Curriculum: Year 1

## Fundamental modules

### Scientific writing 873 (HMS 873)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 0.00                                      |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

### Learning in public health 873 (PHM 873)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 0.00                                      |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

#### Module content

This is the first (one-week) module at the beginning of the year focusing on learning. At the end of this week, you will have a much better understanding of what you actually want to achieve in public health and what you need to learn to get there. You will probably also have changed your views on learning: from individual surface learning and memorization, to valuing deep learning often in a group context. Finally, you will have achieved the ability to use the ever-increasing knowledge in health, philosophy, and ethics that are generated on the internet to your own best advantage.

### Applied research methodology 802 (TNM 802)

|                               |                                |
|-------------------------------|--------------------------------|
| <b>Module credits</b>         | 0.00                           |
| <b>Language of tuition</b>    | Module is presented in English |
| <b>Department</b>             | Health Sciences Deans Office   |
| <b>Period of presentation</b> | Year                           |

#### Module content

\*Attendance module only.

## Core modules

### Biostatistics 1 874 (BOS 874)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 10.00                                     |
| <b>Prerequisites</b>          | No prerequisites.                         |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

## Biostatistics 2 875 (BOS 875)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 10.00                                     |
| <b>Prerequisites</b>          | No prerequisites.                         |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

## Mini-dissertation: Public health medicine 890 (GGs 890)

|                               |                                |
|-------------------------------|--------------------------------|
| <b>Module credits</b>         | 100.00                         |
| <b>Prerequisites</b>          | No prerequisites.              |
| <b>Language of tuition</b>    | Module is presented in English |
| <b>Department</b>             | Public Health Medicine         |
| <b>Period of presentation</b> | Year                           |

## Epidemiology 1 874 (HME 874)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 10.00                                     |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

### Module content

The principles of epidemiology including applied epidemiology (e.g. infectious disease epidemiology, clinical epidemiology and operational research). The use of EpiData software for questionnaire design and data collection.

## Elective modules

### Principles of clinical epidemiology 872 (CLI 872)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 10.00                                     |
| <b>Prerequisites</b>          | No prerequisites.                         |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

### Health risk assessment 871 (EHM 871)

|                        |                               |
|------------------------|-------------------------------|
| <b>Module credits</b>  | 10.00                         |
| <b>Service modules</b> | Faculty of Veterinary Science |
| <b>Prerequisites</b>   | EOH 871                       |

|                               |   |
|-------------------------------|---|
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

### Methods in exposure assessment 872 (EHM 872)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 10.00                                     |
| <b>Prerequisites</b>          | EOM 870                                   |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

### Environmental chemical pollution and health 874 (EHM 874)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 5.00                                      |
| <b>Prerequisites</b>          | No prerequisites.                         |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

### Introduction to toxicology 872 (EOH 872)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 5.00                                      |
| <b>Prerequisites</b>          | No prerequisites.                         |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

### Environmental epidemiology 871 (EOM 871)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 10.00                                     |
| <b>Prerequisites</b>          | No prerequisites.                         |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

## Module content

This module is an introduction of the various types of epidemiological study designs that are applied in the investigation of the association between environmental exposures and health outcomes. Apart from the classical epidemiological study designs (cross-sectional, case-control and cohort designs that are introduced in HME 874), other study designs such as the time-series, case-crossover, panel, spatial, genetic and molecular study designs are introduced and discussed. The statistical techniques that are applied in the time-series, case-crossover, panel, spatial, genetic and molecular study designs are discussed as well as the implication of random and systematic errors in exposure/health assessment on the measures of associations; hence a basic biostatistics vocabulary (introduced in BOS 874) is required.

## Epidemiology 2 870 (EPM 870)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 10.00                                     |
| <b>Prerequisites</b>          | HME 870, BOS 870 and BOS 871              |
| <b>Contact time</b>           | lectures and practicals                   |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

## Module content

Advanced epidemiological concepts and topics building upon learning that has taken place in the introductory epidemiology modules; further study design (including randomised control trials and observational studies); proposal writing; advanced examination of bias, confounding and effect modification; Stratification and standardisation of rates; further selected special biostatistical methods.

## Conducting surveys 873 (EPM 873)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 10.00   |
| <b>Prerequisites</b>          | BOS 870   |
| <b>Contact time</b>           | 1 practical per week, 12 lectures per week, 4 discussion classes per week |
| <b>Language of tuition</b>    | Module is presented in English  |
| <b>Department</b>             | School of Health System and Public Health                                 |
| <b>Period of presentation</b> | Year  |

## Disease surveillance 874 (EPM 874)

|                            |  |
|----------------------------|--|
| <b>Module credits</b>      | 5.00   |
| <b>Prerequisites</b>       | No prerequisites.  |
| <b>Contact time</b>        | 1 practical per week, 3 discussion classes per week, 3 seminars per week |
| <b>Language of tuition</b> | Module is presented in English   |
| <b>Department</b>          | School of Health System and Public Health                                |



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| <b>Period of presentation</b> | Year |
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### Monitoring and evaluation 875 (HME 875)

|                       |       |
|-----------------------|-------|
| <b>Module credits</b> | 15.00 |
|-----------------------|-------|

|                            |                                |
|----------------------------|--------------------------------|
| <b>Language of tuition</b> | Module is presented in English |
|----------------------------|--------------------------------|

|                   |   |
|-------------------|---|
| <b>Department</b> | School of Health System and Public Health |
|-------------------|---|

|                               |      |
|-------------------------------|------|
| <b>Period of presentation</b> | Year |
|-------------------------------|------|

### Qualitative research methods 870 (QHR 870)

|                       |       |
|-----------------------|-------|
| <b>Module credits</b> | 10.00 |
|-----------------------|-------|

|                        |                               |
|------------------------|-------------------------------|
| <b>Service modules</b> | Faculty of Veterinary Science |
|------------------------|-------------------------------|

|                      |                   |
|----------------------|-------------------|
| <b>Prerequisites</b> | No prerequisites. |
|----------------------|-------------------|

|                            |                                |
|----------------------------|--------------------------------|
| <b>Language of tuition</b> | Module is presented in English |
|----------------------------|--------------------------------|

|                   |   |
|-------------------|---|
| <b>Department</b> | School of Health System and Public Health |
|-------------------|---|

|                               |      |
|-------------------------------|------|
| <b>Period of presentation</b> | Year |
|-------------------------------|------|

## Curriculum: Final year

### Fundamental modules

#### Scientific writing 873 (HMS 873)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 0.00                                      |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

#### Learning in public health 873 (PHM 873)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 0.00                                      |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

##### Module content

This is the first (one-week) module at the beginning of the year focusing on learning. At the end of this week, you will have a much better understanding of what you actually want to achieve in public health and what you need to learn to get there. You will probably also have changed your views on learning: from individual surface learning and memorization, to valuing deep learning often in a group context. Finally, you will have achieved the ability to use the ever-increasing knowledge in health, philosophy, and ethics that are generated on the internet to your own best advantage.

#### Applied research methodology 802 (TNM 802)

|                               |                                |
|-------------------------------|--------------------------------|
| <b>Module credits</b>         | 0.00                           |
| <b>Language of tuition</b>    | Module is presented in English |
| <b>Department</b>             | Health Sciences Deans Office   |
| <b>Period of presentation</b> | Year                           |

##### Module content

\*Attendance module only.

### Core modules

#### Biostatistics 1 874 (BOS 874)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 10.00                                     |
| <b>Prerequisites</b>          | No prerequisites.                         |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |



## Biostatistics 2 875 (BOS 875)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 10.00                                     |
| <b>Prerequisites</b>          | No prerequisites.                         |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

## Mini-dissertation: Public health medicine 890 (GGs 890)

|                               |                                |
|-------------------------------|--------------------------------|
| <b>Module credits</b>         | 100.00                         |
| <b>Prerequisites</b>          | No prerequisites.              |
| <b>Language of tuition</b>    | Module is presented in English |
| <b>Department</b>             | Public Health Medicine         |
| <b>Period of presentation</b> | Year                           |

## Epidemiology 1 874 (HME 874)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 10.00                                     |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

### Module content

The principles of epidemiology including applied epidemiology (e.g. infectious disease epidemiology, clinical epidemiology and operational research). The use of EpiData software for questionnaire design and data collection.

## Elective modules

### Principles of clinical epidemiology 872 (CLI 872)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 10.00                                     |
| <b>Prerequisites</b>          | No prerequisites.                         |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

### Health risk assessment 871 (EHM 871)

|                        |                               |
|------------------------|-------------------------------|
| <b>Module credits</b>  | 10.00                         |
| <b>Service modules</b> | Faculty of Veterinary Science |
| <b>Prerequisites</b>   | EOH 871                       |

|                               |   |
|-------------------------------|---|
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

### Methods in exposure assessment 872 (EHM 872)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 10.00                                     |
| <b>Prerequisites</b>          | EOM 870                                   |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

### Environmental chemical pollution and health 874 (EHM 874)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 5.00                                      |
| <b>Prerequisites</b>          | No prerequisites.                         |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

### Introduction to toxicology 872 (EOH 872)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 5.00                                      |
| <b>Prerequisites</b>          | No prerequisites.                         |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

### Environmental epidemiology 871 (EOM 871)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 10.00                                     |
| <b>Prerequisites</b>          | No prerequisites.                         |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

## Module content

This module is an introduction of the various types of epidemiological study designs that are applied in the investigation of the association between environmental exposures and health outcomes. Apart from the classical epidemiological study designs (cross-sectional, case-control and cohort designs that are introduced in HME 874), other study designs such as the time-series, case-crossover, panel, spatial, genetic and molecular study designs are introduced and discussed. The statistical techniques that are applied in the time-series, case-crossover, panel, spatial, genetic and molecular study designs are discussed as well as the implication of random and systematic errors in exposure/health assessment on the measures of associations; hence a basic biostatistics vocabulary (introduced in BOS 874) is required.

## Epidemiology 2 870 (EPM 870)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 10.00                                     |
| <b>Prerequisites</b>          | HME 870, BOS 870 and BOS 871              |
| <b>Contact time</b>           | lectures and practicals                   |
| <b>Language of tuition</b>    | Module is presented in English            |
| <b>Department</b>             | School of Health System and Public Health |
| <b>Period of presentation</b> | Year                                      |

## Module content

Advanced epidemiological concepts and topics building upon learning that has taken place in the introductory epidemiology modules; further study design (including randomised control trials and observational studies); proposal writing; advanced examination of bias, confounding and effect modification; Stratification and standardisation of rates; further selected special biostatistical methods.

## Conducting surveys 873 (EPM 873)

|                               |   |
|-------------------------------|---|
| <b>Module credits</b>         | 10.00   |
| <b>Prerequisites</b>          | BOS 870   |
| <b>Contact time</b>           | 1 practical per week, 12 lectures per week, 4 discussion classes per week |
| <b>Language of tuition</b>    | Module is presented in English  |
| <b>Department</b>             | School of Health System and Public Health                                 |
| <b>Period of presentation</b> | Year  |

## Disease surveillance 874 (EPM 874)

|                            |  |
|----------------------------|--|
| <b>Module credits</b>      | 5.00   |
| <b>Prerequisites</b>       | No prerequisites.  |
| <b>Contact time</b>        | 1 practical per week, 3 discussion classes per week, 3 seminars per week |
| <b>Language of tuition</b> | Module is presented in English   |
| <b>Department</b>          | School of Health System and Public Health                                |



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|                               |      |
|-------------------------------|------|
| <b>Period of presentation</b> | Year |
|-------------------------------|------|

### Monitoring and evaluation 875 (HME 875)

|                       |       |
|-----------------------|-------|
| <b>Module credits</b> | 15.00 |
|-----------------------|-------|

|                            |                                |
|----------------------------|--------------------------------|
| <b>Language of tuition</b> | Module is presented in English |
|----------------------------|--------------------------------|

|                   |   |
|-------------------|---|
| <b>Department</b> | School of Health System and Public Health |
|-------------------|---|

|                               |      |
|-------------------------------|------|
| <b>Period of presentation</b> | Year |
|-------------------------------|------|

### Qualitative research methods 870 (QHR 870)

|                       |       |
|-----------------------|-------|
| <b>Module credits</b> | 10.00 |
|-----------------------|-------|

|                        |                               |
|------------------------|-------------------------------|
| <b>Service modules</b> | Faculty of Veterinary Science |
|------------------------|-------------------------------|

|                      |                   |
|----------------------|-------------------|
| <b>Prerequisites</b> | No prerequisites. |
|----------------------|-------------------|

|                            |                                |
|----------------------------|--------------------------------|
| <b>Language of tuition</b> | Module is presented in English |
|----------------------------|--------------------------------|

|                   |   |
|-------------------|---|
| <b>Department</b> | School of Health System and Public Health |
|-------------------|---|

|                               |      |
|-------------------------------|------|
| <b>Period of presentation</b> | Year |
|-------------------------------|------|

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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.