

# **SPECIALISATION IN EPIDEMIOLOGY AND QUANTITATIVE METHODS**

**(EFFECTIVE FROM AY2022/2023 INTAKE, A MINIMUM GRADE OF 'B' FOR ALL SPECIALISATION COURSES AND SPH5005 PRACTICUM IS REQUIRED TO QUALIFY FOR A SPECIALISATION.)**

**A) FOR STUDENTS ADMITTED TO  
THE PROGRAMME BEFORE  
AY2023/2024**

**B) FOR STUDENTS ADMITTED TO  
THE PROGRAMME FROM  
AY2023/2024 ONWARDS**

**MASTER OF PUBLIC HEALTH**

**A) FOR STUDENTS ADMITTED TO THE PROGRAMME BEFORE  
AY2023/2024**

<b>SPECIALISATION IN EPIDEMIOLOGY AND QUANTITATIVE METHODS</b>
<b>COMPETENCIES</b>
<p>(a) Demonstrate a well-developed understanding of the role of epidemiological methodologies in public health research</p> <p>(b) Be able to critically evaluate epidemiological investigations including the research question, study design, statistical analyses, results and interpretation of observational and experimental research studies relevant to public health research and practice.</p> <p>(c) Formulate meaningful public health research questions and develop an appropriate study protocol for grant applications.</p> <p>(d) Be familiar with methods of data collection and management of data in epidemiologic studies.</p> <p>(e) Apply appropriate biostatistics methods, using software packages (e.g., STATA or R) to perform data analysis with interpretation and application of findings.</p>
<b>SPECIALISATION CORE COURSES (12 UNITS)</b>
<p>1. SPH5101 Advanced Quantitative Methods I <b>OR</b> SPH6002 Advanced Quantitative Methods II</p> <p>2. SPH5103 Collection, Management and Analysis of Quantitative Data</p> <p>3. SPH5203 Advanced Epidemiology I <b>OR</b> SPH6001 Advanced Epidemiology II</p>
<b>SPECIALISATION ELECTIVE COURSES (8 UNITS)</b>
<ul style="list-style-type: none"> <li>• SPH5102 Design, Conduct and Analysis of Clinical Trials</li> <li>• SPH5104 Analytics for Better Health</li> <li>• SPH5201 Control of Communicable Diseases</li> <li>• SPH5202 Control of Non-Communicable Diseases</li> <li>• SPH5205 Urban Outbreak Management</li> <li>• SPH6004 Advanced Statistical Learning</li> <li>• SPH5405 Introduction to Health Services Research*</li> <li>• SPH5407 Programme Evaluation*</li> <li>• SPH5408 Public Health and Aging*</li> </ul>

## MASTER OF PUBLIC HEALTH

### SPH5005 PRACTICUM REQUIREMENTS

The SPH5005 Practicum should be on an epidemiological study focused on an exposure, condition or disease of interest to students. Students could conduct primary research; collecting data to answer their research question or utilise secondary data (faculty datasets, school cohort study datasets, public data) to perform data-analysis and interpretation. Other projects could include a systematic review, programme evaluation, or a disease modelling study.

## B) FOR STUDENTS ADMITTED TO THE PROGRAMME FROM AY2023/2024 ONWARDS

<b>SPECIALISATION IN EPIDEMIOLOGY AND QUANTITATIVE METHODS</b>
<b>COMPETENCIES</b>
<ul style="list-style-type: none"> <li>(a) Demonstrate a well-developed understanding of the role of epidemiological methodologies in public health research</li> <li>(b) Be able to critically evaluate epidemiological investigations including the research question, study design, statistical analyses, results and interpretation of observational and experimental research studies relevant to public health research and practice.</li> <li>(c) Formulate meaningful public health research questions and develop an appropriate study protocol for grant applications.</li> <li>(d) Be familiar with methods of data collection and management of data in epidemiologic studies.</li> <li>(e) Apply appropriate biostatistics methods, using software packages (e.g., STATA or R) to perform data analysis with interpretation and application of findings.</li> </ul>
<b>SPECIALISATION CORE COURSES (12 UNITS)</b>
<ul style="list-style-type: none"> <li>1. SPH5101 Advanced Quantitative Methods I <b>OR</b> SPH6002 Advanced Quantitative Methods II</li> <li>2. SPH5103 Collection, Management and Analysis of Quantitative Public Health Data</li> <li>3. SPH5203 Advanced Epidemiology I <b>OR</b> SPH6001 Advanced Epidemiology II</li> </ul>
<b>SPECIALISATION ELECTIVE COURSES (8 UNITS)</b>
<ul style="list-style-type: none"> <li>• SPH5102 Design, Conduct and Reporting of Clinical Trials</li> <li>• SPH5104 Analytics for Better Health</li> <li>• SPH5201 Control of Infectious Diseases</li> <li>• SPH5202 Control of Non-Communicable Diseases</li> <li>• SPH5205 Urban Outbreak Management</li> <li>• SPH6004 Advanced Statistical Learning</li> </ul>

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