

PROGRAMME CURRICULUM

MASTER OF SCIENCE IN APPLIED BIOMEDICINE

Core Courses

All students, regardless of specialisation, are required to complete the following 4 core courses (12 units):

| SEMESTER | PROPOSED COURSE TITLE | COURSE CODE | UNITS |
|--------------|-------------------------------------|-----------------|-------|
| 1 | Biomedical Innovation & Enterprise | ABM5003 | 4 |
| 1 | Advanced Biomedical Informatics | BMI5101B | 4 |
| 2 | Advanced Biostatistics for Research | ABM5002 | 2 |
| Special Term | Leadership in Biomedicine | ABM5001 | 2 |

Compulsory Courses by Specialisation

To graduate with a specialisation, students must complete 5 compulsory courses (20 units) specific to their chosen specialisation:

VACCINOLOGY AND IMMUNOTHERAPY SPECIALISATION

Compulsory Courses (20 units)

| SEMESTER | PROPOSED COURSE TITLE | COURSE CODE | UNITS |
|----------|---|----------------|-------|
| 1 | Applied Immunology | ABM5101 | 4 |
| 1 | Vaccine Development and its Modern Applications | ABM5102 | 4 |
| 1 | Advanced Technologies in Immune Therapeutic Development | ABM5103 | 4 |
| 2 | Microbiome-Aging-Immunity Crosstalk | ABM5104 | 4 |
| 2 | Clinical Immunology and Immunotherapeutics | MDG5207 | 4 |

INFECTIOUS DISEASES MANAGEMENT SPECIALISATION

Compulsory Courses (20 units)

| SEMESTER | PROPOSED COURSE TITLE | COURSE CODE | UNITS |
|--------------|--|-------------|-------|
| 1 | Vaccine Development and its Modern Applications | ABM5102 | 4 |
| 1 | Drugs Used in Infectious Diseases | ABM5105 | 4 |
| 1 | Infectious Diseases: Principles & Research Methods | MDG5246 | 4 |
| 2 | One World, One Health: Ecosystems, Animals and Us | ABM5107 | 4 |
| 2 | Control of Infectious Diseases* | SPH5201 | 4 |
| 2 | Urban Outbreak Management* | SPH5205 | 4 |
| Special Term | Urban Field Epidemiology* | SPH5206 | 4 |

*Students may read only one of the three approved SPH courses.

DRUG DISCOVERY AND DEVELOPMENT SPECIALISATION

Compulsory Courses (20 units)

| SEMESTER | PROPOSED COURSE TITLE | COURSE CODE | UNITS |
|----------|---|-------------|-------|
| 1 | Drugs Used in Infectious Diseases | ABM5105 | 4 |
| 1 | Advanced Topics in Pharmacology | MDG5204 | 4 |
| 2 | Anticancer Therapeutics | ABM5106 | 4 |
| 2 | Current Practices in Biotechnology | MDG5232 | 4 |
| 2 | Current Topics in Drug Design and Development | MDG5233 | 4 |

Note: Do not select a course as an elective if you have already completed it as part of your specialisation's compulsory requirements.

General Elective Courses

Students from any specialisation or the non-specialisation path may select elective courses from the list below, unless the course has already been taken as part of their compulsory course requirements.

| SEMESTER | PROPOSED COURSE TITLE | COURSE CODE | UNITS |
|----------|---|-------------|-------|
| 1 | Applied Immunology | ABM5101 | 4 |
| 1 | Vaccine development and its modern applications | ABM5102 | 4 |
| 1 | Advanced technologies in immune therapeutic development | ABM5103 | 4 |
| 1 | Drugs Used in Infectious Diseases | ABM5105 | 4 |
| 1 | Advanced Topics in Pharmacology | MDG5204 | 4 |
| 1 | Advanced Topics in Signal Transduction | MDG5229 | 4 |
| 1 | Infectious Diseases: Principles & Research Methods | MDG5246 | 4 |
| 2 | Microbiome-Aging-Immunity crosstalk | ABM5104 | 4 |
| 2 | Anticancer Therapeutics | ABM5106 | 4 |
| 2 | One World, One Health: Ecosystems, Animals and Us | ABM5107 | 4 |
| 2 | Techniques in Biomedical Research | MDG5102 | 4 |
| 2 | Clinical Immunology and Immunotherapeutics | MDG5207 | 4 |
| 2 | Current Practices in Biotechnology | MDG5232 | 4 |
| 2 | Current Topics in Drug Design and Development | MDG5233 | 4 |
| 1 & 2 | Capstone Project* | ABM5004 | 8 |

*The Capstone Project is a single 8-unit course that runs across Semesters 1 and 2. For students choosing to take on the Capstone Project, they are required to find a supervisor prior to their enrolment.