



Yong Loo Lin
School of Medicine

STUDY PLAN

MASTER OF SCIENCE IN APPLIED
BIOMEDICINE (MSc ABM)



PROPOSED STUDY PLAN

GRADUATION REQUIREMENTS

To graduate, students must complete 40 units of coursework.

Students can choose to specialise in Vaccinology and Immunotherapy, Infectious Diseases Management, or Drug Discovery and Development, or pursue the programme without a specialisation.

Vaccinology and Immunotherapy Specialisation

	Core Courses			Compulsory Courses			Elective Courses
Semester 1	ABM5003	Biomedical Innovation & Enterprise	4 units	ABM5101	Applied Immunology	4 units	Choose: Capstone Project OR 2 elective courses to fulfil 8 units
	BMI5101B	Advanced Biomedical Informatics	4 units	ABM5102	Vaccine Development and its Modern Applications	4 units	
				ABM5103	Advanced Technologies in Immune Therapeutic Development	4 units	
Semester 2	ABM5002	Advanced Biostatistics for Research	2 units	ABM5104	Microbiome-Aging-Immunity Crosstalk	4 units	
	ABM5001	Leadership in Biomedicine	2 units	MDG5207	Clinical Immunology and Immunotherapeutics	4 units	
			12 units +				20 units +
						Total	40 units

Infectious Diseases Management Specialisation

	Core Courses			Compulsory Courses			Elective Courses
Semester 1	ABM5003	Biomedical Innovation & Enterprise	4 units	ABM5102	Vaccine Development and its Modern Applications	4 units	Choose: Capstone Project OR 2 elective courses* to fulfil 8 units
	BMI5101B	Advanced Biomedical Informatics	4 units	ABM5105	Drugs Used in Infectious Diseases	4 units	
Semester 2				MDG5246	Infectious Diseases: Principles & Research Methods	4 units	
	ABM5002	Advanced Biostatistics for Research	2 units	ABM5107	One World, One Health: Ecosystems, Animals and Us	4 units	
Semester 2	ABM5001	Leadership in Biomedicine	2 units	SPH5201	Control of Infectious Diseases**	4 units	
				SPH5205	Urban Outbreak Management**	4 units	
Special Term				SPH5206	Urban Field Epidemiology**	4 units	
			12 units +				20 units +
							8 units
							Total
							40 units

Drug Discovery and Development Specialisation

	Core Courses			Compulsory Courses			Elective Courses
Semester 1	ABM5003	Biomedical Innovation & Enterprise	4 units	ABM5105	Drugs Used in Infectious Diseases	4 units	Choose: Capstone Project OR 2 elective courses* to fulfil 8 units
	BMI5101B	Advanced Biomedical Informatics	4 units	MDG5204	Advanced Topics in Pharmacology	4 units	
Semester 2	ABM5002	Advanced Biostatistics for Research	2 units	ABM5106	Anticancer Therapeutics	4 units	
	ABM5001	Leadership in Biomedicine	2 units	MDG5232	Current Practices in Biotechnology	4 units	
				MDG5233	Current Topics in Drug Design and Development	4 units	
			12 units +				20 units +
							8 units
							Total
							40 units

Non-Specialisation

	Core Courses			Compulsory Courses	
Semester 1	ABM5003	Biomedical Innovation & Enterprise	4 units	Select a combination of elective courses* and/or capstone project to fulfil 28 units	
	BMI5101B	Advanced Biomedical Informatics	4 units		
Semester 2	ABM5002	Advanced Biostatistics for Research	2 units		
	ABM5001	Leadership in Biomedicine	2 units		
			12 units +		
				Total	40 units

*If a course has already been taken as a compulsory requirement in the specialisation, it cannot be counted again as an elective.

**Students in the Infectious Diseases Management Specialisation may read only one of the three approved SPH courses, to count towards their compulsory specialisation requirements.

Courses taken beyond the required 40 units for graduation may be subject to additional tuition fees. Please refer to our programme webpage for details.

COURSE OFFERINGS

Please note that courses are available once per academic year (AY). You may refer to [NUSMods](#) for more information regarding the courses and plan your timetable.

Semester 1

TYPE	COURSE CODE	PROPOSED COURSE TITLE	UNITS	NOTES
Core	ABM5003	Biomedical Innovation & Enterprise	4	
Core	BMI5101B	Advanced Biomedical Informatics	4	
Elective	ABM5004	Capstone Project*	8	
Elective	ABM5101	Applied Immunology	4	VI / IDM
Elective	ABM5102	Vaccine Development and its Modern Applications	4	VI
Elective	ABM5103	Advanced Technologies in Immune Therapeutic Development	4	VI
Elective	ABM5105	Drugs Used in Infectious Diseases	4	IDM / DDD
Elective	MDG5246	Infectious Diseases: Principles & Research Methods	4	IDM
Elective	MDG5204	Advanced Topics in Pharmacology	4	DDD
Elective	MDG5229	Advanced Topics in Signal Transduction	4	

Semester 2

TYPE	COURSE CODE	PROPOSED COURSE TITLE	UNITS	NOTES
Core	ABM5001	Leadership in Biomedicine	2	
Core	ABM5002	Advanced Biostatistics for Research	2	
Elective	ABM5004	Capstone Project*	8	
Elective	ABM5104	Microbiome-Aging-Immunity Crosstalk	4	VI
Elective	ABM5106	Anticancer Therapeutics	4	DDD
Elective	ABM5107	One World, One Health: Ecosystems, Animals and Us	4	IDM
Elective	MDG5102	Techniques in Biomedical Research	4	
Elective	MDG5207	Clinical Immunology and Immunotherapeutics	4	VI
Elective	MDG5232	Current Practices in Biotechnology	4	DDD
Elective	MDG5233	Current Topics in Drug Design and Development	4	DDD
Elective	SPH5201	Control of Infectious Diseases**	4	IDM
Elective	SPH5205	Urban Outbreak Management**	4	IDM

Special Term

TYPE	COURSE CODE	PROPOSED COURSE TITLE	UNITS	NOTES
Elective	SPH5206	Urban Field Epidemiology**	4	IDM

**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.*

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Notes legend:

VI : Compulsory in Vaccinology and Immunotherapy

IDM : Compulsory in Infectious Diseases Management

DDD : Compulsory in Drug Discovery and Development

TYPE	COURSE CODE	PROPOSED COURSE TITLE	UNITS	NOTES
Elective	ABM5004	Capstone Project*	8	
Elective	ABM5101	Applied Immunology	4	VI / IDM
Elective	ABM5102	Vaccine Development and its Modern Applications	4	VI
Elective	ABM5103	Advanced Technologies in Immune Therapeutic Development	4	VI
Elective	ABM5104	Microbiome-Aging-Immunity Crosstalk	4	VI
Elective	ABM5105	Drugs Used in Infectious Diseases	4	IDM / DDD
Elective	ABM5106	Anticancer Therapeutics	4	DDD
Elective	ABM5107	One World, One Health: Ecosystems, Animals and Us	4	IDM
Elective	ABM5246	Infectious Diseases: Principles & Research Methods	4	IDM
Elective	MDG5102	Techniques in Biomedical Research	4	
Elective	MDG5204	Advanced Topics in Pharmacology	4	DDD
Elective	MDG5207	Clinical Immunology and Immunotherapeutics	4	VI
Elective	MDG5229	Advanced Topics in Signal Transduction	4	
Elective	MDG5232	Current Practices in Biotechnology	4	DDD
Elective	MDG5233	Current Topics in Drug Design and Development	4	DDD
Elective	SPH5201	Control of Infectious Diseases**	4	IDM
Elective	SPH5205	Urban Outbreak Management**	4	IDM
Elective	SPH5206	Urban Field Epidemiology**	4	IDM

***Students in the Infectious Diseases Management Specialisation may read only one of the three approved SPH courses, to count towards their compulsory specialisation requirements.*

Notes legend:

VI : Compulsory in Vaccinology and Immunotherapy

IDM : Compulsory in Infectious Diseases Management

DDD : Compulsory in Drug Discovery and Development



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APPLY NOW



For more information about the programme, please visit our webpage or contact us via email at [**mscabm@nus.edu.sg**](mailto:mscabm@nus.edu.sg)