

Course progression map for 2027 commencing students

This progression map provides advice on the suitable sequencing of units and guidance on how to plan unit enrolment for each semester of study. It does not substitute for the list of required units as described in the course 'Requirements' section of the [Handbook](#).

M6049 Master of Bioinformatics

Semester 1 intake, Clayton – Full-time

Year 1 Semester 1	EPM5033 Programming Principles for Health Data Analytics using Python (6 credit points)* OR MCB2011 Molecular Biology and the Cell (6 credit points) + Electives (6 credit points)**	MPH5041 Introductory Biostatistics (6 credit points)	BMS5XXX AI Integrated Proteomics and Protein Design (12 credit points)	
Year 1 Semester 2	FIT9136 Introduction to Python Programming (6 credit points)	BIO2010 Data Science for biologists (6 credit points)*	BMS5309 Advanced Transcriptomics: Bulk, Single-Cell, and Spatial Analysis (12 credit points)	
Year 2 Semester 1	BMS5304 Bioinformatics Research Proposal (for students undertaking the research pathway) (6 credit points) OR BMS5305 High Performance Computing for Bioinformatics (for students undertaking the coursework pathway) (6 credit points)	BMS5013 Research training: Ethics and integrity, biostatistics and critical thinking (6 credit points)	BMS5302 Machine Learning: AI for Bioinformatics (6 credit points)	BMS5303 Research Case studies in Bioinformatics (6 credit points)
Year 2 Semester 2	BMS5306 Bioinformatics Research Project (for research pathway students) (24 credit points)			
	OR			
	BMS5307 Research Advanced Case Studies in Bioinformatics (for coursework pathway students) (12 credit points)		BMS5308 Integrative Bioinformatics and Multi-Omic Bioinformatics Research (for coursework pathway students) (6 credit points)	MGF5910 Project management fundamentals (for students undertaking the coursework pathway) (6 credit points)
Part A: Foundation studies (12cp)				
Part B: Core studies (54cp)				
Part C: Application studies (30cp)				

Depending on your prior studies you may be required to complete up to 12cp of the following:

- BIO2010 Data science for biologists* + EPM5033 Programming principles for health data analytics using Python* (no electives)
- MCB2011 Molecular biology and the cell + 6cp of electives**

*Must be completed by students with science, biology, biomedical science and medicine background

**Must be completed by students with IT/engineering background

^**Electives:** Students who are not required to complete BIO2010, FIT9136 and MCB2011 must complete 12 credit points of additional elective units. *Note: Elective units can be from MNHS or across the university providing you meet the respective pre-requisites.*

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M6049 Master of Bioinformatics

Semester 1 intake, Clayton – Part-time

Year 1 Semester 1	EPM5033 Programming Principles for Health Data Analytics using Python (6 credit points)* OR MCB2011 Molecular Biology and the Cell (6 credit points) + Electives (6 credit points)**	MPH5041 Introductory Biostatistics (6 credit points)
Year 1 Semester 2	FIT9136 Introduction to Python Programming (6 credit points)	BIO2010 Data Science for biologists (6 credit points)*
Year 2 Semester 1	BMS5XXX AI Integrated Proteomics and Protein Design (12 credit points)	
Year 2 Semester 2	BMS5309 Advanced Transcriptomics: Bulk, Single-Cell, and Spatial Analysis (12 credit points)	
Year 3 Semester 1	BMS5304 Bioinformatics Research Proposal (for students undertaking the research pathway) (6 credit points) OR BMS5305 High Performance Computing for Bioinformatics (for students undertaking the coursework pathway) (6 credit points)	BMS5013 - Research training: Ethics and integrity, biostatistics and critical thinking (6 credit points)
Year 3 Semester 2	BMS5306 Bioinformatics Research Project (for research pathway students) (24 credit points)	
	OR	
	BMS5307 Research Advanced Case Studies in Bioinformatics (for coursework pathway students) (12 credit points)	
Year 4 Semester 1	BMS5302 Machine Learning: AI for Bioinformatics (6 credit points)	BMS5303 Research Case studies in Bioinformatics (6 credit points)
Year 4 Semester 2	BMS5306 Bioinformatics Research Project (for research pathway students) (24 credit points)	
	OR	
	BMS5308 Integrative Bioinformatics and Multi-Omic Bioinformatics Research (for coursework pathway students) (6 credit points)	MGF5910 Project management fundamentals (for students undertaking the coursework pathway) (6 credit points)

Part A: Foundation studies (12cp)
Part B: Core studies (54cp)
Part C: Application studies (30cp)

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- **BIO2010 Data science for biologists* + EPM5033 Programming principles for health data analytics using Python**
* (no electives)
- **MCB2011 Molecular biology and the cell + 6cp of electives****

*Must be completed by students with science, biology, biomedical science and medicine background

**Must be completed by students with IT/engineering background

^Electives: Students who are not required to complete BIO2010, FIT9136 and MCB2011 must complete 12 credit points of additional elective units. *Note: Elective units can be from MNHS or across the university providing you meet the respective pre-requisites.*