### **Bachelor of Biomedicine**

**COURSE CODE: HBBM** 

**Mid-Year Entry** 

CAMPUS	Footscray Park (FP) and St Albans (SA)
COLLEGE	College of Sport, Health and Engineering
STUDY MODE	Full Time
DURATION	3 years Full Time equivalent
FEE TYPE	For information on course fees, refer to http://vu.edu.au/fees
APPLICATION METHOD	VTAC - https://vtac.edu.au Direct Application - https://gotovu.custhelp.com/app/landing
TIMETABLE	vu.edu.au/timetables
COURSE REQUIREMENTS	To attain the Bachelor of Biomedicine students will be required to complete 288 credit points consisting of:  • 96 credit points of First Year Core units  • 144 credit points of Core studies  • 48 credit points of Minor studies
FURTHER INFORMATION	Unit and course information is available from the University course search site at http://vu.edu.au/course-search or go to https://askvu.vu.edu.au or Phone VUHQ on 03 9919 6100
COURSE CHAIR	Sean Yan
COURSE ADVICE	AskVU https://askvu.vu.edu.au/app/askcua

Note: Students are required to enrol in all units for semester 1 and 2 and are not permitted to enrol in more than 48 credit points per semester as a full-time load.

Core/Elective Core (a unit that must be completed) & Elective (you have some choice in what you select).

Prerequisites A few units within the degree have 'prerequisites'. These prerequisites must be met before enrolment in the unit is permitted. Generally, these prerequisites require the successful completion of a unit or units taken at an earlier stage in the course. Students should pay particular attention to these prerequisite requirements as failure to meet these can seriously hinder progression through the course.

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### YEAR 1

UNIT CODE	UNIT TITLE	UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
RCS1601	Chemistry 1A	Core	2B1 2024	12	FP	
RBM1200	Functional Anatomy of the Limbs	Core	2B2 2024	12	SA	
HHH1001	Mathematics and Statistics for Biomedicine	Core	2B3 2024	12	FP	
RCS1602	Chemistry 1B	Core	2B4 2024	12	FP	RCS1601

#### **2025 UNITS**

Note: The below units are reserved for 2025 enrolment. Enrolments will be open by the end of October 2024.

HBM1101 Gene and Evolutionary Biology	Core	1B2 2025	12	FP	
RBM1518 Human Physiology 1	Core	1B2, 1B3, 1B4, WB1 2025	12	FP	
RBM1100 Functional Anatomy of the Trunk	Core	1B1, 1B2, 1B3, 1B4 2025	12	SA	
RBM1528 Human Physiology 2	Core	2B1, 2B2, 2B3 2025	12	FP	RBM1518

### YEAR 2

UNIT CODE	UNIT TITLE	UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
RBM2133	Cell and Molecular Biology	Core	1B3 2024	12	ORT	RBM2560; and RBM1528; or RBF1310
RBM2530	Pathophysiology 1	Core	1B1, 1B3, 1B4, WB1 2024	12	FP	RBM1518, RBM1528
RBM2560	Medical Biochemistry	Core	1B1, 1B2, 1B3, 1B4 2024	12	FP	RBM1528; or RBF1310; and RCS1602
	Minor 1 - Unit 1	Minor		12		
RBM2200	Functional Anatomy of the Head and Back	Core	2B1, 2B2, 2B3, 2B4 2025	12	SA	RBM1100, RBM1200
RBM2540	Pathophysiology 2	Core	2B2, 2B3, 2B4 2025	12	FP	RBM2530
RBM2800	Cardiorespiratory and Renal Physiology	Core	2B2 2025	12	FP	RBM1528
	Minor 1 - Unit 2	Minor		12		

### YEAR 3

UNIT CODE	UNIT TITLE	UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
HBM3101	Research Methods	Core	1B2, 1B3, 1B4 2024	12	FP	RBM2540
HBM3104	Exercise Is Medicine	Core	1B1, 1B2 2024	12	FP	RBM2560, RBM2800
HBM3106	Reproductive and Developmental Biology	Core	1B1, 1B2, 1B4 2024	12	SA	
	Minor 1 - Unit 3	Minor		12		
HBM3105	Research Project	Other	2B1, 2B2, WB1 2025	12	SA	НВМ3101
HBM3204	Biomolecular Mechanisms of Disease	Other	2B2 2025	12	ORT	HBM3104
HBM3205	Clinical Genetics and Cellular Basis of Disease	Core	2B4 2025	12	FP	RBM2540, RBM2560, RBM2133
RBM3640	Advanced Neurosciences	Core	1B4 2025	12	ORT	RBM2100; or RBM2540; or RBM2800
	Minor 1 - Unit 4	Minor		12		

List of minor/s available in this course
HMIHNU Health and Nutrition
HMIIMM Immunopharmacology
HMIIPH Integrative Physiology
AMITEM The Entrepreneurial Mindset

#### MINORS:

#### **Health and Nutrition HMIHNU**

The Health and Nutrition Minor introduces the student to the role nutrition plays in individual health and populations through the lifespan. Upon completion of the minor students will have an understanding of the link between nutrition and health, wellness and illness and their determinants.

UNIT CODE	UNIT TITLE	UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
HBM2103	Digestion, Nutrition and Metabolism	Minor	1B2, 1B3, 1B4 2024	12	SA	RBM1528; or RBM1174; or HBM1202
HHN2001	Family Health and Nutrition Through the Lifespan	Minor	1B2, 1B3 2024	12	FP	
HHN2402	Diet & Disease	Minor	2B1 2024	12	FP	
HHN3002	Sport and Exercise Nutrition	Minor	2B3 2024	12	FP	HHN2001; or HBM2103; or

#### Immunopharmacology HMIIMM

The Immunopharmacology minor covers Microbiology, Drug Discovery and Development, Immunology and Pharmacology. It focuses on the micro-organisms that cause human disease, their transmission and infection control, as well as the application of microbiology in medicine and drug development. It provides a pathway to understanding how the immune system can be exploited to develop novel therapies via a pharmacological approach. This minor is vital for students wanting to explore post graduate research or work in large companies which develop pharmaceutical products and their application to disease.

UNIT CODE	UNIT TITLE	UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
HBM2105	Medical Microbiology and Immunity	Minor	2B1, 2B2, 2B3, 2B4 2024	12	SA	RBM1528; or RBF1310
RBM2100	Rehabilitation Anatomy	Minor		12	SA	



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			1B1, 1B2, 1B4 2024			RBM1200; or AHE1101; and AHE2202
RBM3720	Immunology	Minor	1B1, 1B3, 1B4 2024	12	SA	RBM2540
RBM3800	Pharmacology	Minor	2B3, 2B4 2024	12	SA	RBM2540, RBM2560

### **Integrative Physiology HMIIPH**

On completion of the integrated physiology minor, students will have the knowledge and skills to apply a broad knowledge from the fundamental units of biomedical science, integrating aspects of neuromuscular physiology and research design, in a practical forum of a research project. Students will have the opportunity to apply this theoretical knowledge to practical situations in laboratory simulated learning environments, and community and industry settings, sometimes as part of a research team. Specifically, students will independently design and develop a research proposal which: 1) demonstrates an understanding of the principles of scientific research, experiment/project design; 2) develops skills in accessing, selecting, recording, reviewing and managing research data and research information; 3) critically analyses and synthesizes research data and other information; 4) considers social, cultural, and environmental issues; 5) adopts ethical practice including preparing an application for ethics approval; and 6) communicates information in oral and written forms to a range of associates including supervisors, peers, research teams, community and industry partners.

UNIT CODE	UNIT TITLE	UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
HBM2103	Digestion, Nutrition and Metabolism	Minor	1B2, 1B3, 1B4 2024	12	SA	RBM1528; or RBM1174; or HBM1202
HHN2402	Diet & Disease	Minor	2B1 2024	12	FP	
			2B3, 2B4 2024		ORT	
RBM3264	Advanced Nerve and Muscle Physiology	Minor	1B1, 1B2, 1B3 2024	12	SA	RBM2800
RBM3265	Exercise Biochemistry and Integrated Metabolism	Minor	2B3, 2B4 2024	12	FP	RBM2560

### The Entrepreneurial Mindset AMITEM

The nature of work is changing. The rapid pace in which technology is developing is causing widespread disruption, both in organisational cultures and working practices. With new technologies such as artificial intelligence and machine-learning, robotics, nanotechnology, 3-D printing, and genetics and biotechnology coming up, this disruption is only getting started.



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Success in this new world is increasingly dependent on personal initiative; a self-starting, future-oriented and persistent proactive mindset. Such a mindset combined with effective teamwork in a multidisciplinary context has been the driver of entrepreneurial success for decades. More and more employers are starting to demand these skills from their employees as well.

This unit set equips students with the skills and competencies to future-proof yourself, creating experiences that allow for a strong start to and succeeding in your chosen profession (be that as an employee or self-employed). Students work collaboratively on employing an evidence-based approach to identifying problems and implementing solutions, equipping themselves with the skills and knowledge to lead in the future of work.

The first unit explores how to come up with ideas and how to critically assess the potential of the idea. During this unit we introduce a number of key processes and concepts like where to start when exploring ideas, how to run user interviews and prototyping. The second unit introduces the Minimum Viable Product (MVP) and allows students to experiment with the evidence-based, iterative approach of User Validation. The third unit focuses on how to effectively communicate the findings of the first two units in a compelling story to gather critical support. Finally, the last unit introduces students to growth strategies and how these strategies drive execution.

The unit set culminates in a pitch-style event where the students pitch their project in a live setting to an audience of stakeholders, integrating the knowledge, skills and understandings they have developed.

The Entrepreneurial Mindset unit set aims to provide career defining experiences. The minor is demanding and is a great fit for students who want to be part of something exciting and new while creating their own success.

UNIT CODE	UNIT TITLE	UNIT TYPE	SEM	CREDIT POINTS	CAMPUS	PRE-REQUISITES
AEN2001	Problem Discovery	Minor	1B1 2024	12	ORT	
AEN2002	Solution Validation	Minor	1B2, 2B2 2024	12	ORT	
AEN3001	Storytelling for Impact	Minor	1B3 2024	12	ORT	AEN2002
AEN3002	Hacking Growth	Minor	1B4 2024	12	ORT	AEN2002