B1411 BSc (Physical Sciences) in Physics MJ-PHY (students without ATAR Physics)

Academic Chair: Associate Professor Piotr Kowalczyk **Start Date:** Semester 1 2027

	Semester 1 Units	CP	Semester 2 Units	CP
Year 1 – 2027	PEN100 Transitioning in Time and Space	3	PEN152 Principles of Physics	3
	PEN120 General Physics	3	CHE144 Foundations of Chemistry‡	3
	MAS182 Introductory Calculus with Applications*	3	MAS161 Calculus and Matrix Algebra	3
	Elective Unit	3	Discovery Unit	3
	Total	**12**	**Total**	**12**
	Semester 1 Units	**CP**	**Semester 2 Units**	**CP**
Year 2 - 2028	PEN201 Thermodynamics for Chemistry and Physics	3	PEN200 The Quantum Realm	3
	PEN203 Scientific Computing and Visualisation	3	CHE200 Electromagnetism and Electrochemistry	3
	MAS220 Mathematical Methods and Multivariable Calculus[a] **OR** Elective Unit	3	MAS221 Mathematical Modelling and Differential Equations[a] **OR** Elective Unit	3
	Elective Unit	3	Elective Unit	3
	Total	**12**	**Total**	
	Semester 1 Units	**CP**	**Semester 2 Units**	**CP**
Year 3 – 2029	PEN300 Sensors and Biophysics	3	PEN302 Functional Materials	3
	CHE300 Surface and Interface Phenomena	3	PEN301 Soft Matter and Statistical Physics	3
	MSP201 Real World Learning[b] **OR** MAS300 Quantitative Projects and Consulting[b]	3	Elective Unit	3
	Elective Unit	3	Elective Unit	3
	Total	12	**Total**	12

TOTAL CREDIT POINTS 72

Semester 1 notes	Semester 2 notes
*MAS182 is not necessary if you have Year 12 Specialist Mathematics ATAR or equivalent. In that case you may wish to do MAS161 in Semester 1. [a] students only need to do one of MAS220 or MAS221 to meet requirements for the major. [b] MSP201 and MAS300 are recommended electives, not compulsory units. They are not required for successful completion of the Physics major.	‡ Students who have not successfully completed ATAR Chemistry will need to undertake CHE140 Fundamentals of Chemistry prior to enrolling in CHE144 [a] students only need to do one of MAS220 or MAS221 to meet requirements for the major.

Please note: This course plan is a sample only and must be read in conjunction with the full course structure, unit prerequisites and enrolment options as outlined in the Handbook. Students should note that due to unit prerequisites, commencing study in Semester 2 may extend the duration of the course. This information is correct as at 26/10/27.