

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

Academic Chair: [Associate Professor Piotr Kowalczyk](#)

Start Date: Semester 2 2026

Year	Semester 1 Units		Semester 2 Units	
		CP		CP
Year 1 – 2026			PEN100 Transitioning in Time and Space	3
			PEN120 General Physics	3
			MAS182 Introductory Calculus with Applications*	3
			Discovery/Elective	3
			<b>Total</b>	<b>12</b>
Year 2 - 2027	Elective	3	PEN201 Thermodynamics for Chemistry and Physics	3
	CHE144 Foundations of Chemistry‡	3	MAS220 Mathematical Methods and Multivariable Calculus <sup>a</sup> <b>OR</b> Elective	3
	MAS161 Calculus and Matrix Algebra	3	PEN203 Scientific Computing and Visualisation	3
	PEN152 Principles of Physics	3	Discovery/Elective	3
	<b>Total</b>	<b>12</b>	<b>Total</b>	<b>12</b>
Year 3 - 2028	Elective	3	PEN300 Sensors and Biophysics	3
	MAS221 Mathematical Modelling and Differential Equations <sup>a</sup> <b>OR</b> Elective	3	PEN301 Soft Matter and Statistical Physics	3
	PEN200 The Quantum Realm	3	MSP201 Real World Learning <b>OR</b> MAS300 Quantitative Projects and Consulting	3
	CHE200 Electromagnetism and Electrochemistry	3	Elective	3
	<b>Total</b>	<b>12</b>	<b>Total</b>	<b>12</b>
Year 4 - 2029				
	PEN302 Functional Materials	3		
	CHE300 Surface and Interface Phenomena	3		
	MAS300 Quantitative Projects and Consulting <b>OR</b> MSP201 Real World Learning	3		
	Elective	3		
	<b>Total</b>	<b>12</b>		

**TOTAL CREDIT POINTS 72**

Semester 1 notes	Semester 2 notes
<p>*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.</p> <p><sup>a</sup> students only need to do one of MAS220 or MAS221 to meet requirements for the major</p>	<p>‡ Students who have not successfully completed ATAR Chemistry will need to undertake CHE140 Fundamentals of Chemistry prior to enrolling in CHE144</p> <p><sup>a</sup> students only need to do one of MAS220 or MAS221 to meet requirements for the major</p>

**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 8/6/26.