

Non-SSG Courses for Singaporean and SPR only

Full-time international students will pay the tuition fees at equal instalments over the first two semesters, while all Singaporeans and SPR will be billed based on the number of units read per semester.

Core Courses:

Students must complete 4 core courses (total 20 units):

Course Code	Course Title	Units	SSG Funding
PC5101	Physics and Technology	4	
PC5102	Physics in Industry	4	
PC5204	Magnetism and Spintronics	4	
PC5287	M.Sc. Coursework Thesis for Physics and Technology	8	

Elective Courses:

Students are required to complete 5 elective courses (total 20 units), excluding PC5286 (MSc Physics Coursework Project) and PC5198 (Graduate Seminar Course in Physics). Students can take a maximum of two level 4000 (PC4XXX) courses.

The list of elective courses are:

Course Code	Course Title	Units	SSG Funding
PC4228	Device Physics for Quantum Technology	4	Yes
PC4230	Quantum Mechanics III	4	
PC4236	Computational Condensed Matter Physics	4	Yes
PC4240	Solid State Physics II	4	Yes
PC4241	Statistical Mechanics	4	
PC4242	Electricity and Magnetism III	4	
PC4243	Atomic and Molecular Physics II	4	
PC4245	Particle Physics	4	
PC4246	Quantum Optics	4	Yes
PC4248	General Relativity	4	
PC4249	Astrophysics II	4	
PC4253	Thin Film Technology	4	Yes
PC4259	Surface Physics	4	
PC4262	Remote Sensing	4	Yes
PC4264	Advanced Solid State Devices	4	
PC4267	Biophysics III	4	
PC4268	Biophysical Instrumentation and Biomolecular Electronics	4	
PC4274/PC4274A	Mathematical Methods in Physics III	4	
PC4441	Climate Science and Climate Change Fundamentals	4	
PC5201	Advanced Quantum Mechanics	4	
PC5202	Advanced Statistical Mechanics	4	
PC5203	Advanced Solid State Physics	4	Yes

PC5204B	Special Topics in Physics: Analytic Approximations	4	
PC5205	Topics in Surface Physics	4	Yes
PC5206	Selected Topics in Quantum Field Theory	4	
PC5209	Accelerator Based Materials Characterisation	4	Yes
PC5210	Advanced Dynamics	4	
PC5212	Physics of Nanostructures	4	Yes
PC5213	Advanced Biophysics	4	
PC5214	Essential Techniques in Experimental Physics	4	Yes
PC5215	Numerical Recipes with Applications	4	
PC5216	Advanced Atomic and Molecular Physics	4	
PC5228	Quantum Information and Computation	4	Yes
PC5247	Photonics II	4	Yes
PC5251	Applied Machine Learning and Data Science	4	
PC5252	Bayesian Statistics and Machine Learning	4	
PC5253	Complex Systems Analysis and Modelling	4	
PC5271	Physics of Sensors	4	
PC5274	Advanced Mathematical Methods in Physics	4	
QT5201S	Quantum Electronics	4	Yes