

Bachelor of Science

Major in Physics

ENTRY REQUIREMENTS

Assumed Knowledge

For astronomy and astrophysics, mathematics, statistical data science and physics majors: HSC Mathematics Advanced (Band 4), or equivalent. If you haven't met the required minimum level of achievement (Band 4 or equivalent), you can undertake an alternative introductory unit of study in that area.

Recommended Studies

HSC Mathematics Advanced or equivalent, at least 2 units of science. For astronomy and astrophysics, and physics majors: HSC Physics. For mathematics major: HSC Mathematics Extension 1 (Band E2) or HSC Mathematics Extension 2, or equivalent.

CORE ZONE

Essential units = Each unit is 10 credit points.

Capstone unit = 10 credit points

FOSE3000 Making Science Work for You and Society: Capstone

Essential units = 20 credit points

FOSE1000 Becoming a Scientist

FOSE2000 The Science Practitioner

Statistics Elective units = 10 credit points

Complete 10 credit points from the following units

STAT1103 Introduction to Psychological Design and Statistics

STAT1170 Introductory Statistics

STAT1371 Statistical Data Analysis

Data and Computing Elective units = 10 credit points

Complete 10 credit points from the following options.

- Students enrolling in Astronomy, Physics, Mathematics or Statistical Data Science majors must enrol in FOSE1030.
- Student enrolling in Biology, Biotechnology, Chemistry, Human Biology, Earth and Environmental Sciences, and Physiological Sciences major must enrol in FOSE1025.
- Students enrolling in double majors that requires both FOSE1025 and FOSE1030 can complete the other Data & Computing unit not selected below in the Other Science - 20 credit points option set.

FOSE1025 Scientific Computing

FOSE1030 Introduction to Python Programming

Other Science Elective units = 20 credit points

20 credit points from ASTR, BIOL, CHEM, EESC, ENVS, MATH, PHYS, PSYU, STAT, BMOL, MOLS, FOSE units at 1000 or 2000 level

Elective unit = 10 credit points

Complete 10 credit points from the following PACE units

PHYS3810 PACE: Professional Experience in Physics and Astronomy

MOLS3002 PACE: Engaging the Community in Science

MAJOR

Major requirements = 80 credit points

Essential Units = 60 credit points

Complete all of the following units

PHYS1010 Modern Mechanics

PHYS1020 Electric and Magnetic Interactions

PHYS2010 Classical Mechanics

PHYS2020 Electromagnetism and Relativity

PHYS2030 Quantum Physics

PHYS3020 Energy and Entropy

Elective Units = 20 credit points

Complete 20 credit points from the following options.

PHYS3180 Condensed Matter and Nanoscale Physics

PHYS3010 Advanced Electromagnetism and Optics

PHYS3140 Foundations of Quantum Information

FLEXIBLE ZONE

Flexible Zone = 80 credit points

You can use your flexible zone to enrol in any Undergraduate unit for which you meet the requisites. You may also use your flexible zone to complete a second major or minor(s)