

Science Extension 2022

1 unit for Year 12 (HSC)
Board Developed Course

Course Description

Science Extension is a new course with a focus on the authentic application of scientific research skills to produce a Scientific Research Report generally acceptable for publication. Students propose and develop a research question, formulate a hypothesis and develop evidence-based responses to create their Scientific Research Report which is supported by a Scientific Research Portfolio. The four modules integrate the skills of Working Scientifically within the course content to form the framework for the Scientific Research Project.

HSC Course Content

The Year 12 course consists of four modules.

- Module 1 The Foundations of Scientific Thinking (10 hours)
- Module 2 The Scientific Research Proposal (10 hours)
- Module 3 The Data, Evidence and Decisions (20 hours)
- Module 4 The Scientific Research Report (20 hours)

Particular Course Requirements

Prerequisite courses for Science Extension Year 12 are one of, or a combination (up to 6 units of study) of, Biology, Chemistry, Earth and Environmental Science, Investigating Science or Physics in Year 11. Co-requisite courses for Science Extension Year 12 are one of, or a combination (up to 7 units of study) of, Biology, Chemistry, Earth and Environmental Science, Investigating Science or Physics in Year 12.

Students must propose and develop a research question, formulate a hypothesis and develop evidence-based responses in the form of a Scientific Research Report, which is supported by a Scientific Research Portfolio. The Scientific Research Report is a result of the student's own work and must adhere to the principles and practices of good scholarship, as identified in the HSC: All My Own Work course. While students may collaborate with and draw upon the expertise, knowledge and data held by others in developing their Scientific Research Report and Portfolio, this assistance must be referenced using accepted protocols. All scientific research must be sensitive to community expectations and individual school requirements in relation to the question being interrogated. Students must adhere to ethical practices in the collection and analysis of data and the communication of results.

Note: Students who have shown an achievement in, and/or aptitude for, any of the Stage 6 Science courses: Biology, Chemistry, Earth and Environmental Science, Investigating Science or Physics, in Year 11 may choose to study Science Extension in Year 12. Ulladulla High School recommends students discuss their suitability for Science Extension with their Year 11 Science course teacher(s) and the Head Teacher Science.

The Year 12 formal school-based assessment program for Science Extension reflects the following requirements:

- the minimum weighting for an individual task is 20%
- the maximum weighting for an individual task is 40%
- three assessment tasks:
 - task one must assess the skills developed in Section 1 of the Scientific Research Portfolio
 - task two must assess the skills developed in Section 2 of the Scientific Research Portfolio
 - task three must assess the Scientific Research Report with a weighting of 40%
- tasks one and two must not assess individual sections of the Scientific Research Report, in draft or final versions
- only one task may be a formal written examination with a maximum weighting of 30%.