



17 October 2018  
Wednesday  
3.30 pm - 6.30 pm

Mackay North SHS  
Valley Street  
North Mackay Q 4740

## NEW CONTENT IN SENIOR BIOLOGY, CHEMISTRY, MATHEMATICS & PHYSICS



northhigh

Refresh your content knowledge in preparation for the new suite of General Senior Syllabuses, at these free interactive workshops, brought to you by The University of Queensland's Faculty of Science.

### BIOLOGY

#### Data Analysis and Interpretation (also suitable for Agricultural Science and Marine Science)

Dr Gurion Ang

This session will cover data summary (means, standard deviation, standard error, uncertainty analysis), two-sample analysis (t-test), correlation analysis (regression), multiple-sample analysis (ANOVA), and count data analysis (G-test). Bring along a laptop (Windows or Mac) with Microsoft Excel 2013 and up (instructions will be provided to registrants on how to access the sample data set).

### CHEMISTRY

#### Structure, Synthesis, Design

Associate Professor Gwen Lawrie

Students are expected to evaluate a claim by setting a valid research question related to the structure and properties of organic materials. This session will cover multiple strategies to engage students with structure-function relationships involving simple molecules and macromolecules.

### MATHEMATICS

#### Statistics in the New Subjects for Mathematical Methods, and Specialist Mathematics

Dr Michael Bulmer

This session will cover an overview and teaching ideas for topics involving the sample mean and sample proportion, the Normal and Binomial distributions, and constructing confidence intervals for population parameters.

#### Graphs and Networks for General Mathematics

Dr Barbara Maenhunt

This session will introduce this new content and provide teaching ideas for topics including using Hungarian algorithm to find matchings in bipartite graphs, and Hamiltonian and Eulerian graphs.

### PHYSICS

#### Special Relativity, Quantum Theory and the Standard Model

Dr Ian McCulloch

Particle physics deals with the properties, relationships, and interactions of subatomic particles. Unit 4 of the General Senior Syllabus in Physics covers special relativity, quantum theory, and the Standard Model of particle physics. Much of this material is likely new to current senior Physics teachers.

#### [Register Here](#)

**Registrations close:** 30 September 2018

Places are limited, please register early.