

# COURSE DETAIL

## GENETICS AND GENOMICS

**Country**

Australia

**Host Institution**

University of Sydney

**Program(s)**

University of Sydney

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Biological Sciences

**UCEAP Course Number**

126

**UCEAP Course Suffix****UCEAP Official Title**

GENETICS AND GENOMICS

**UCEAP Transcript Title**

GENETICS & GENOMICS

**UCEAP Quarter Units**

6.00

**UCEAP Semester Units**

4.00

## Course Description

This course brings together traditional genetic analysis and modern molecular biology to study genetics of all life forms from humans and other complex multicellular organisms through to single celled organisms such as bacteria. Students are introduced to complex modes of Mendelian inheritance, including those involved in human diseases. The molecular basis for different patterns of inheritance will be discussed. The interaction of genes and gene products are illustrated by the examination of the molecular genetics of development. The application of genomics to the study of genetic variation, molecular evolution and gene function in humans and model organisms is also described. In the practical sessions students investigate the genetics of a variety of prokaryotic and eukaryotic organisms in order to illustrate concepts covered in the lecture material. Students develop familiarity and competence with equipment used in molecular genetic analysis, bioinformatics, microscopy, and statistical tests.

## Language(s) of Instruction

English

## Host Institution Course Number

MBLG2072

## Host Institution Course Title

GENETICS AND GENOMICS

## Host Institution Course Details

<http://sydney.edu.au/courses/uos/MBLG2072/genetics-and-genomics>

## Host Institution Campus

sydney

## Host Institution Faculty

## Host Institution Degree

## Host Institution Department

Molecular Bioscience

**Course Last Reviewed**

2022-2023

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