

COURSE DETAIL

DEVELOPMENTAL BIOLOGY

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

136

UCEAP Course Suffix**UCEAP Official Title**

DEVELOPMENTAL BIOLOGY

UCEAP Transcript Title

DEVELOPMENTAL BIOL

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course examines how complex multicellular systems are constructed using both animal and plant systems in a comparative way that reveals common strategies and striking contrasts. It covers the multidisciplinary nature of approaches used, including classical embryology, biochemistry, genetics, transcriptomics, live-imaging, cell biology, physiology and computer simulation. Topics include fundamental concepts, morphogens, establishing body axes, cell polarity, differentiation and commitment, evolution in the context of development, mechanics and morphogenesis with examples from model systems, stem cells and cancer. Practical work includes experiments addressing gene expression, organ identity and homeotic conversions, and uses CRISPR/Cas9 gene editing to demonstrate approaches to the study of developmental biology.

Language(s) of Instruction

English

Host Institution Course Number

BIOL3026

Host Institution Course Title

DEVELOPMENTAL BIOLOGY

Host Institution Course Details

<https://www.sydney.edu.au/units/BIOL3026>

Host Institution Campus

Camperdown/Darlington

Host Institution Faculty

Host Institution Degree

Host Institution Department

Life and Environmental Sciences

Course Last Reviewed

2025-2026

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