

COURSE DETAIL

FUNCTIONAL GENETICS

Country

South Africa

Host Institution

University of Cape Town

Program(s)

University of Cape Town

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Biological Sciences

UCEAP Course Number

111

UCEAP Course Suffix**UCEAP Official Title**

FUNCTIONAL GENETICS

UCEAP Transcript Title

FUNCTIONAL GENETIC

UCEAP Quarter Units

8.00

UCEAP Semester Units

5.30

Course Description

The course shows how the tools of classical and molecular genetics can be applied to understanding the regulation of gene expression, cell differentiation, and patterning in bacteria and eukaryotes. Concepts covered include gene mapping, forward and reverse genetics; microbial genetics, including regulation of the lac operon; CRISPR/ Cas9 gene editing and DNA repair; alternative splicing and sex-determination; epigenetic mechanisms used in dosage compensation; the genetic analysis of cell cycle regulation; stem cell technology and axis determination in Drosophila. Tests and assignments count 40%; practicals count 10%; one three-hour paper written in November counts 50%.

Language(s) of Instruction

English

Host Institution Course Number

MCB2023S

Host Institution Course Title

FUNCTIONAL GENETICS

Host Institution Course Details

https://uct.ac.za/sites/default/files/media/documents/uct_ac_za/49/2023_SCI_Han...

Host Institution Campus

University of Cape Town

Host Institution Faculty

Faculty of Science

Host Institution Degree

Host Institution Department

MOLECULAR AND CELL BIOLOGY

Course Last Reviewed

2023-2024

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