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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