

COURSE DETAIL

CELL BIOLOGY AND CELL TECHNOLOGY

Country

Hong Kong

Host Institution

University of Hong Kong

Program(s)

University of Hong Kong

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Biological Sciences

UCEAP Course Number

115

UCEAP Course Suffix**UCEAP Official Title**

CELL BIOLOGY AND CELL TECHNOLOGY

UCEAP Transcript Title

CELL BIOLOGY & TECH

UCEAP Quarter Units

5.00

UCEAP Semester Units

3.30

Course Description

This course studies the structure and function of cells, the principles and applications of cell culture, and instrumentation in biology and biotechnology. Topics include tools for cell studies; light microscopy; principles of confocal microscopy and image analysis; cellular membranes; organelles; cellular transport (ions transport and ions channels); protein and RNA transport; membrane potentials; action potentials; cell junctions; extracellular matrix; cell to cell interactions; cell to matrix interactions; techniques in animal cell culture; mammalian cells in culture; primary and continuous cell lines; cell types and cell growth parameters; media formulation, growth factors, and design of serum-free media; culture lab facilities and sterilization; mechanism of cryopreservation; techniques in plant cell culture; root and shoot culture; explant regeneration; protoplasts and cell fusion; and secondary metabolites.

Language(s) of Instruction

English

Host Institution Course Number

BIOL3402

Host Institution Course Title

CELL BIOLOGY AND CELL TECHNOLOGY

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Biological Sciences

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