

COURSE DETAIL

MICROSCOPY, BIO-IMAGING

Country

Sweden

Host Institution

Lund University

Program(s)

Lund University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Biological Sciences Bioengineering

UCEAP Course Number

119

UCEAP Course Suffix**UCEAP Official Title**

MICROSCOPY, BIO-IMAGING

UCEAP Transcript Title

MICROSCOPY&IMAGING

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course provides a theoretical introduction to microscopy, with an emphasis on fluorescence microscopy. Topics include theoretical principles of confocal microscopy and the use of deconvolution in microscopy, an overview of different types of advanced research microscopes as well as imaging methods that are not based on optical microscopes; preparation and optimization of both fixed and live samples for microscopy; microscopic visualization of cellular structures and physiological functions with fluorescent markers; and a theoretical introduction to digital visualization, with an emphasis on fluorescence-based methods and digital imaging. A practical project includes the preparation, documentation, and analysis of microscopy specimens with an oral and written presentation.

Language(s) of Instruction

English

Host Institution Course Number

EXTP60

Host Institution Course Title

MICROSCOPY, BIO-IMAGING

Host Institution Campus

Host Institution Faculty

Faculty of Engineering

Host Institution Degree

Host Institution Department

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