COURSE DETAIL

MOLECULAR BIOLOGY
Country Japan
Host Institution Waseda University
Program(s) Waseda University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Biological Sciences Biochemistry
UCEAP Course Number 102
UCEAP Course Suffix
UCEAP Official Title MOLECULAR BIOLOGY
UCEAP Transcript Title MOLECULAR BIOLOGY
UCEAP Quarter Units 3.00
UCEAP Semester Units 2.00

Course Description

This course covers the molecules that constitute living organisms and their control mechanisms, as well as biotechnologies and the principles of aging and disease. Students are expected to acquire the abilities to understand and explore biological systems at the molecular and cellular level.

Course topics include:

- Cells: The Fundamental Units of Life and Chemical Components of Cells
- Protein structure and function
- DNA and Chromosomes
- DNA Replications and Repair
- From DNA to Protein: How Cells Read the Genome
- Analyzing the Structure and Function of Genes
- How Cells Obtain Energy from Food and Energy Generation in Mitochondria and Chloroplasts
- Cell Signaling
- Cytoskeleton
- The Cell-Division Cycle
- Cell Communities: Tissues, Stem Cells, and Cancer

Language(s) of Instruction
English

Host Institution Course Number
LE302 / BIOX221L

Host Institution Course Title
MOLECULAR BIOLOGY

Host Institution Course Details
https://www.wsl.waseda.jp/syllabus/JAA104.php?pKey=210LE30200512023210LE3020021...

Host Institution Campus
SILS

Host Institution Faculty
Host Institution Degree
Host Institution Department SILS - Life, Environment
Course Last Reviewed 2023-2024

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