

Syllabus Reference

Course title	Molecular and Cellular Biology II		
Term	通年(前期開始) Whole Year		
Credit(s)	2		
The main day		The main period	
School/Program	School of Life Science		
Department/Program	Common Subjects of Life Science		
Category	Common		
Lecturers			

Instructor

Full name

* MAESHIMA KAZUHIRO

Outline	Basic features of molecular and cellular biology will be lectured and discussed. These include regulation of transcription and translation, protein structure and function, post-translational modification, structure and dynamics of chromosome, structure and dynamics of cell, organelles and cytoskeleton, metabolism, protein traffic, signal transduction and cell imaging.
Goal	<ol style="list-style-type: none"> 1. Elucidation of biological phenomena in a molecular level 2. Understanding methods to analyze in a molecular level 3. Elucidation of biological phenomena in a cellular level 4. Understanding methods to analyze in a cellular level
Grading system	01:Four-grade evaluation (A, B, C, D)
Grading policy	The grades will be A, B, C, and D, which are determined by the quality of the paper, which must be submitted to the lecturer by the provided deadline. The subject(s) of the paper must be one of the four important aspects that are presented in the above Course Objectives.
Lecture Plan	<p>May 14, 2021– February 4, 2022 13:30–15:10 on Fridays</p> <p>2021</p> <p>May 14 Kazuhiro Maeshima, DNA and Structure of Chromosome May 21 Yasuto Murayama, Partition of Chromosomes May 28 Masato Kanemaki, Replication, Recombination and Repair of Chromosome June 4 Koichi Kawakami, Transposable Element June 11 Yuta Shimamoto, Structure and Function of Protein June 18 Jun-ichi Nakayama, Regulation of Transcription June 25 Nobuyuki Shiina, Regulation of Translation July 2 Yoshihisa Oda, Cell Structure I October 8 Shin-ya Miyagishima, Cell Structure II October 15 Akatsuki Kimura, Cytoskelton October 22 Tomomi Tsubouchi, Cell Cycle and Cell Differentiation</p> <p>2022</p> <p>January 7 Shigenori Nonaka, Cilia and Flagella January 14 Kazuhiro Aoki, Signal Transduction January 21 Takashi Ueda, Intracellular Transport January 28 Yoshiaki Kamada & Shoji Mano, Autophagy February 4 Akira Yamashita, Meiosis</p>
Location	Oral and Zoom: Lecture Room (B202) or Seminar Room (B301), 2nd or 3rd floor of Library in the National Institute of Genetics / Seminar Room 4 (131) 1st floor in the National Institute for Basic Biology
Language	English
Textbooks and references	Molecular Biology of the Cell, B. Alberts et al., Garland Science.

Genes, B. Lewin, Prentice Hall.

Others

It is desirable to have the basic knowledge corresponding to the lecture of Molecular and Cellular Biology I (E-learning), but it is not mandatory. It is given as an oral lecture, which will be provided in English.