科目名　Course Title	
細胞学2(Cell Biology II)	
学科・専攻　Department/Program	受講年次　Grade
G30 Biology	2nd
授業形態　Class style	必修・選択の別　Compulsory or Elective
講義	* See "Remarks"
時間割コード　Registration code	開講期・曜日・時限　Semester,Day & Period
0682110	Fall semester Mon：3
単位数　Credit	科目区分　Course type
2	

担当教員　Instructor	VASSILEVA Maria(VASSILEVA Maria)
所属研究室　Laboratory	E202
連絡先　Contact	mnvassileva@bio.nagoya-u.ac.jp
居室　Room	E202

講義の目的とねらい　Course purpose

Aims: this course provides students with knowledge on cellular membranes structure and its fundamental importance for cellular processes - intracellular transport, cell communication and responses to the environment. Furthermore, the course provides details on the mechanisms of how plant and animal cells generate energy.

履修要件　Prerequisite

Strongly recommended to have completed Fundamentals of Biology 1.

履修取り下げの方法について　How to Apply for Course Withdrawal

<「履修取り下げ届」提出の要・不要 Necessity/Unnecessity to submit "Course Withdrawal Request Form">
Necessary
<条件等 Conditions>
Students need to submit a Course Withdrawal Request Form when they have no intention of finishing the course. Submission of Course Withdrawal Request is required for receiving an Absent. This can be done by sending e-mail to the course instructor.

成績評価　Grading

Evaluation is based on in-class participation, assignments and examinations. Passing grade requires a total cumulative grade of minimum 60/100.

不可（F）と欠席（W）の基準　Criteria for "Absent(W)" &"Fail" grades

Absent: based on submission of Course Withdrawal Request Form.
Fail: Total accumulated score of less than 60%.

関連する科目　Related courses

Cell Biology I, Cell Biology III

教室　Class room

Check the Course Timetable.
A 408 (in Fall 2020 this course may be conducted entirely online, information about the actual course format will be provided on NUCT course space)

到達目標　Goal

By the end of this course students should be equipped with the knowledge and appropriate scientific terminology concerning the following:
(1) understand and explain cellular membrane structure and its fundamental function in cell transport, cell signaling and energy generation
(2) understand and explain the mechanism of action potential generation
(3) understand and explain the mechanism of energy generation in mitochondria and chloroplasts
(4) understand and explain protein transport and secretion through endomembrane system network
(5) understand and explain the mechanisms of cell signaling
Students will also gain experience reading primary scientific literature related to the course content.

授業内容　Content

1. Membrane structure and function
2. Intracellular Compartments and Transport;
3. Cell Communication;
4. How cells obtain energy from food
5. Energy Generation in Mitochondria and Chloroplasts.

Preparation outside the class hours: students are required to prepare before class by reading the assigned textbook material and creating schematic summary of important concepts before class.

教科書　Textbook

Essential Cell Biology, B. Alberts et al., Garland Science.

参考書　Recommended reading

Becker`s world of the cell, Hardin, Bertoni, Kleinsmith, Pearson.
Molecular Biology of the Cell, B. Alberts et al., Taylor & Francis.

連絡方法　Contact method

The course instructor is available for questions outside the class hours by e-mail.

その他　Remarks

*See Course List and Graduation Requirements for your program for your enrollment year.
The class time is focused on discussion, so it is essential that students come prepared.