

## Fundamentals of Biology I

<b>Registration Code</b>	0063311	<b>Credits</b>	2.0
<b>Course Category</b>	Sciences Basic		
<b>Term (Semester) / Day / Period</b>	G-I (1st year, Fall Semester) / Wed. / 3 (13:00~14:30)		
<b>Instructor</b>	CARTAGENA Joyce Abad		
<b>Target Schools (Programs)</b>	Sc(P·C·B)·En(C·Au)·Ag(B)		

● **Goals and Objectives of the Course**

The objective of this course is to introduce the key concepts of biology and provide the foundation for specialized courses. Furthermore, this course aims to encourage students to think like scientists and develop scientific reasoning and literacy skills.

● **Course Prerequisites**

A background in basic Biology from high school is not absolutely required but is ideal.

● **Course Contents/Plan**

1. *Cell Biology*

Cell Structure and Function

2. *Genetics and Molecular Biology*

Meiosis and Sexual Reproduction

Mendel's Experiments and Heredity

Modern Understandings of Inheritance

DNA Structure and Function

Genes and Proteins

Gene Expression

Biotechnology and Genomics

3. *Evolution*

Evolutionary Processes

4. *Biological Diversity*

Microbial Life: Prokaryotes and Protists

The Evolution of Plant and Fungal Diversity

The Evolution of Vertebrate and Invertebrate Diversity

5. *Plant Biology*

Plant Structure and Function

● **Course Evaluation Methods (may be modified)**

Attendance and class participation 30%

Home works 20%

Examinations 50%

● **Notice for Students**

1. Course webpage

NUCT (Nagoya University Collaboration and Course Tools; <https://ct.nagoya-u.ac.jp/portal>) is an online system that will be used for this course. PowerPoint slides, other learning materials (such as videos, websites, etc.) and home works will be accessible through this page.

2. Attendance

In case of emergency or absence from class, students should notify the instructor as soon as possible either by email or thru NUCT.

	<p>3. Make-up exam Make-up exams may be given on condition that the student can provide acceptable reasons for his/her absence.</p> <p>4. Academic honesty and original work Cheating and copying (including plagiarism) will not be tolerated in this class.</p> <p>5. Course withdrawal Students who wish to withdraw from the course will have to submit a duly accomplished Course Withdrawal Form by November 18, 2020.</p> <p>6. Reading assignments Students are expected to read one to two chapters of the textbook every week, and come to class prepared for discussion.</p>
<b>Textbook</b>	<p>Biology 2e (2020) OpenStax, Rice University Digital Version ISBN-13 978-1-947172-52-4 <a href="https://openstax.org/details/books/biology-2e">https://openstax.org/details/books/biology-2e</a> (Free online textbook)</p>
<b>Reference Book</b>	<p>Campbell Biology Concepts and Connections 9/e 2019 (Pearson New International Edition) ISBN-10: 1292229470 *or older edition Authors: J. Reece, M. Taylor, E. Simon, J. Dickey</p>
<b>Reference website</b>	TBA
<b>Message</b>	<p>For inquiries, don't hesitate to send an email to <a href="mailto:joyce@agr.nagoya-u.ac.jp">joyce@agr.nagoya-u.ac.jp</a></p>