科目ナンバリング	U-LAS14 10013 LE68				
授業科目名 <英訳>	Basic Biology and Metabolism-E2 Basic Biology and Metabolism-E2			担当者所属 職名・氏名	薬学研究科　講師　MACPHERSON TOM
群	自然科学科目群	分野(分類)	生物学(総論)	使用言語	英語
旧群	B群	単位数	2単位	週コマ数	1コマ	授業形態	講義（対面授業科目）
開講年度・開講期	2026・後期	曜時限	火4	配当学年	全回生	対象学生	全学向

[授業の概要・目的]

How do living organisms grow, generate energy, sustain life, and reproduce?

These are the core questions we will explore in this introductory biology course, which focusses on the cellular, chemical, and genetic processes that support life.
Designed to provide a clear and accessible introduction to fundamental biological concepts and how we study them, this course requires no prior knowledge of biology, ensuring students at all levels can comfortably engage with the material.
Students will have the opportunity to explore topics of their own interests through class presentation assignments, such as news or journal articles related to cell biology.

Students are encouraged to continue on to "Introduction to Molecular Cell Biology-E2 (1st semester)" as a follow-up to this course.

[到達目標]

Students will gain a foundational understanding of cell structure and function.
Students will acquire an understanding of how basic biological processes influence both simple and complex living organisms.
Students will develop the ability to understand and discuss various aspects of Biology in English.

[授業計画と内容]

1. Introduction to Biology
2. Cells & How We Study Them
3. Energy & Metabolism I
4. Energy & Metabolism II
5. Protein Structure and Function
6. Cell Signaling
7. Mid-term exam + Feedback,
   Explanation of Class Presentations
8. DNA and Chromosomes
9. Gene Transcription & Translation
10. Reproduction & Cell Cycle
11. Class Presentations
12. Genetic Sequencing & Engineering
13. Gene Mutation & Variation
14. Cancer

≪Final exam≫

15. Feedback

Basic Biology and Metabolism-E2(2)へ続く↓↓↓

Basic Biology and Metabolism-E2(2)

[履修要件]

This is an introductory course and prior knowledge of the topic is not necessary. All essential knowledge for the class and exams will be provided in class. Students need only to have a curiosity to learn about the biological processes of life.

[成績評価の方法・観点]

Attendance & Participation 25%.
Midterm Exam (Multiple Choice) 25%.
Class Presentation (Short Oral Talk) 25%.
Final Exam (Multiple Choice) 25%.

[教科書]

Alberts, Hopkin, Johnson, Morgan, Raff, Roberts, Walter 『Essential Cell Biology 6th Edition』（W.W. Norton and Company, 2023）ISBN:978-1-324-03339-4
We will occasionally also the following free textbook.
OpenStax Biology 2e freely available to download at the URL below.

（関連ＵＲＬ）

https://openstax.org/details/books/biology-2e

[授業外学修（予習・復習）等]

Review from the textbook, previous lecture content, and preparation for assignments to be presented in class.

[その他（オフィスアワー等）]

The contents of the syllabus are a guide to the content of the course, the exact content may change. Input and suggests from students are very welcome and I am happy to discuss the course material with students via email or in-person meeting.

[主要授業科目（学部・学科名）]

薬学部薬科学科、薬学部薬学科