

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 特定准教授 CAMPBELL, Douglas Simon			
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	2024・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】											
<p>Cells are fundamental units that make up living things or exist on their own as organisms such as bacteria. In this course we will explore what cells are, their structure, chemical components and the basics of cell functions.</p> <p>This course is designed to provide the fundamentals of cell biology that are required by anyone to understand both the biomedical and the broader biological issues that affect our lives. Since Cell Biology is a very broad topic, students will have the opportunity to investigate areas of their own specific interests via presentation assignments such as news or journal articles covering Cell Biology.</p> <p>Students are encouraged to continue taking "Introduction to Molecular Cell Biology-E2 (1st semester)" as a follow-up to this course.</p>											
【到達目標】											
<p>Students will acquire a basic understanding of cell structure and function.</p> <p>Students should be able to appreciate basic biology and in particular the importance of cell structure and function and their relationship with the organism as a whole.</p> <p>Students should be able to understand and discuss various aspects of Bioscience in English.</p>											
【授業計画と内容】											
<p>1. Introduction to the course and Cell Biology</p> <p>2. Cells, the Fundamental Units of Life</p> <p>3. Chemical Components of Cells 1</p> <p>4. Chemical Components of Cells 2</p> <p>5. Energy, Catalysis and Biosynthesis 1</p> <p>6. Energy, Catalysis and Biosynthesis 2</p> <p>7. Protein Structure and Function 1</p> <p>8. Midterm Exam / Protein Structure and Function 2</p> <p>9. Protein Structure and Function 3</p> <p>10. DNA and Chromosomes</p> <p>11. DNA Replication and Repair</p> <p>12. How Cells Read the Genome: From DNA to Protein 1</p> <p>13. How Cells Read the Genome: From DNA to Protein 2</p> <p>14. Biotechnology And genomics</p> <p>15. Final exam</p> <p>16. Feedback</p>											
----- Basic Biology and Metabolism-E2(2)へ続く -----											

## Basic Biology and Metabolism-E2(2)

### 【履修要件】

Students should have a general interest and curiosity about the study Molecular Cell Biology. As this is an introductory course prior knowledge of the topic is not necessary. essential knowledge for the class will be provided as needed in class.

### 【成績評価の方法・観点】

Class Presentation assignments 20%

Midterm exam 20%

Final examination 60%

The exact proportion will depend on the number of assignments in the course, these may be in place of a midterm exam

### 【教科書】

“ Essential Cell Biology ” 5th edition (2019) by Alberts et al., W.W. Norton and Company, New York  
ISBN 9780393679533

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 from students is very welcome to suggest aspects to cover in the course. I am always happy to discuss with prospective students via email and meet with prior appointment.