

<b>Modern Biology</b>			
<b>Undergraduate / Graduate</b>	Undergraduate	<b>Registration Code</b>	0053521
<b>Course Category</b>	Sciences Liberal	<b>Credits</b>	2.0
<b>Term (Semester) / Day / Period</b>	G-II (1st year, Spring Semester) / Wed. / 5 (16:30~18:00)		
<b>Instructor</b>	BUSTOS VILLALOBOS Itzel		
<b>Contact e-mail of the Instructor</b>	bustositzel@med.nagoya-u.ac.jp		
<p>●<b>Goals of the Course</b>            The purpose of this course is to learn the principles, and techniques of modern biology. This course is particularly designed for those <b>who have not learned biology previously</b> or whose major is other than biology, and who may think that they do not need to know any biology at all. The topics are covered in a general manner, but certain level of diligence in grasping concepts and memorizing the terminology is expected. <i>Its content is very basic for students on science.</i></p>			
<p>●<b>Objectives of the Course</b>            Students are expected to be able to understand the generalities of biology.</p>			
<p>●<b>Course Content or Plan</b></p> <ol style="list-style-type: none"> <li>1. Introduction to Life on Earth</li> <li>2. Essential Chemistry// The Molecules of Life</li> <li>3. Anatomy and physiology of cell</li> <li>4. Cellular Respiration // Photosynthesis</li> <li>5. <u>Exam 1</u></li> <li>6. Cellular Reproduction // Patterns of Inheritance</li> <li>7. The Structure and Function of DNA</li> <li>8. DNA Technology</li> <li>9. Biological evolution</li> <li>10. The Evolution of Animals</li> <li>11. <u>Exam 2</u></li> <li>12. Normal physiology/ generalities of cancer</li> <li>13. Generalities of Cancer continuation/ screening tools</li> <li>14. Treatments/ how technology improved cancer treatment</li> <li>15. <u>Final Exam</u></li> </ol>			
<p>●<b>Course Prerequisites and Related Courses</b>            Your name should be listed in this course in order to attend the class. If you want to attend only a specific lecture, please make request a week in advance. <b>No companions/ partners of students will be allowed during class if not listed.</b></p>			
<p>●<b>Course Evaluation Method and Criteria</b></p> <p><b>Assistance</b>            Two exams plus a final exam            Participation during classes</p> <p>There will be <b>NO make-up exam</b>. In the event of a missed exam due to a serious illness, accident or family emergency, compelling written documentation of the reason for the absence will be required.</p> <p>Students wishing to withdraw from the course without academic penalty must do so by requesting course withdrawal <b>before May 13, 2022 18:00 hrs (Tokyo time)</b>. That is the only way to receive an “Absent” grade, which does not count in GPA. After the date above, students may not withdraw from the course: a numeric grade will be calculated according to the evaluation method given in this syllabus, and the resulting letter grade will be reported to the Administration at the end of the course. This grade will count in GPA. If percentages are not reached, this will lead to “F” score. Also, in case of no submission more than one test and lack of attendance, an “F” will be given.</p>			

**●Study Load (Self-directed Learning Outside Course Hours)**

Pre-study: not needed

During class: 90 minutes sessions. Sometimes quiz will be done during class. Participation will be important.

After: Will be important to review after class, about one hour per session.

**●How to Respond to Questions**

In case the class is delivered in person: during class

In case the class is live-online: during class or send email so it can be replied during following session.

In case of recording lecture (depending on student's location some lectures might be recorded): send email directly to [bustositzel@med.nagoya-u.ac.jp](mailto:bustositzel@med.nagoya-u.ac.jp) and it will be replied during the following class.

**●Notice for Students**

Few pre-recorded lectures might be prepared, however currently is not planned for this course. If you have a very different time zone with Japan, this might not be a good course to join. If many students are from a very different time zone, pre-recorded lectures might happen. However, not all lectures will be delivered in this way; therefore you will need to join on line in many cases. Please consider this time difference at the time of joining this course.

**●Message from the Instructor**

Currently, the course is planned to be delivered online. Depending on later COVID situation, students' location, etc; this might change to hybrid/ in person class.

**●Courses taught by Instructors with practical experience**

The last part of the course: normal physiology, cancer generalities/ treatment is based on practical experience of working as medical doctor in Mexico as well as working as researcher in Japan in the development of new cancer treatments.

<b>Textbook</b>	Campbell Essential Biology, 6th Edition, by Simon, Reece, and Dickey (Pearson Education, 2016). ISBN-13: 978-0133917789, ISBN-10: 9780133917789
<b>Reference Book</b>	Campbell Biology, 11 <sup>th</sup> edition by Lisa A. Urry, Michael L Cain. ISBN-13: 978-0134093413, ISBN-10: 0134093410
<b>Reference Website for this Course</b>	N/A