

<b>Course number</b>	U-LAS70 10002 SE50				
<b>Course title (and course title in English)</b>	ILAS Seminar-E2 :Decoding the Fundamentals of Cancer Biology ( がんの生物学 ) ILAS Seminar-E2 :Decoding the Fundamentals of Cancer Biology	<b>Instructor's name, job title, and department of affiliation</b>	Graduate School of Medicine Professor, THUMKEO , Dean		
<b>Group</b>	Seminars in Liberal Arts and Sciences	<b>Number of credits</b>	2	<b>Number of weekly time blocks</b>	1
<b>Class style</b>	seminar (Face-to-face course)	<b>Year/semesters</b>	2026 · First semester		<b>Quota (Freshman)</b> 9 (9)
<b>Target year</b>	Mainly 1st year students	<b>Eligible students</b>	For all majors		<b>Days and periods</b> Tue.5
<b>Classroom</b>	38, Yoshida-South Campus Academic Center Bldg. North Wing			<b>Language of instruction</b>	English
<b>Keyword</b>	Human Diseases / Medicine / Immunology / Cancer / Biomedical Sciences				
<b>[Overview and purpose of the course]</b>					
<p>This ILAS seminar is designed to provide freshmen undergraduate students who are interested in cancer, a brief introduction to biology of cancer and the current therapeutics. Students will start to learn from this seminar about the introduction of molecular and cellular biology, and then subsequently the biology principles of cancer. Moreover, recent topics on cancer immunotherapy will also be discussed in this seminar. Finally, students will conduct a presentation on their selected paper and discuss about the current and future therapeutics. Also noted that language that is accessible to students without a medical background will be used in this seminar to help their understanding.</p>					
<b>[Course objectives]</b>					
By participating in this ILAS Seminar, students will gain fundamental knowledge of the current understanding of human cancer.					
<b>[Course schedule and contents]</b>					
The seminar comprises interactive lectures, reading circles, and student presentations.					
<p>Introduction</p> <ol style="list-style-type: none"> <li>1. Central Dogma &amp; basic cell biology</li> <li>2. Cell cycle and chromatin architecture</li> <li>3. gene expression</li> <li>4. The nature of cancer</li> <li>5. Oncogenes 1</li> <li>6. Oncogenes 2</li> <li>7. Ras/Tumor suppressor gene 1: pRb and control of cell cycle</li> <li>8 Tumor suppressor gene 2: p53 and control of cell cycle</li> <li>9. Tumor microenvironment and angiogenesis</li> <li>10. Cancer immunology 1</li> <li>11. Cancer immunology 2</li> <li>12. Cancer immunotherapy 1</li> <li>13. Cancer immunotherapy 2</li> </ol>					
<p>Continue to ILAS Seminar-E2 :Decoding the Fundamentals of Cancer Biology ( がんの生物学 ) (2)</p>					

14. Summary & Presentation

15. Feedback

Note: The schedule is subject to adjustments based on the number of students and specific needs of the class.

**[Course requirements]**

None

**[Evaluation methods and policy]**

Attendance and Active participation to the lectures (60%)

Quality of student presentations and discussions (30%)

A report (10%)

**[Textbooks]**

Handouts and reading materials will be provided when necessary.

**[References, etc.]**

( **References, etc.** )

Robert Weinberg 『the biology of cancer, 3rd edition』 ( GARLAND Science, 2023 ) ISBN:978-0-393-88766-2

**[Study outside of class (preparation and review)]**

I recommend students to confirm the handouts for each lecture and the relevant reference textbook to learn about the lecture content in advance of the class. Handouts for each lecture will be uploaded on LMS few days before each class.

**[Other information (office hours, etc.)]**

Consultation via email or online meetings such as Zoom is possible. For those students who prefer to discuss directly with the instructor, please arrange appointments by email in advance.

**[Essential courses]**