Course number	U-LAS70 10002 SE50				
Course title (and course title in English)	ILAS Seminar-E2 :From Traditional Herbal Remedies to Robotics and Gene Editing: Breakthroughs in Medical Treatments（漢方からロボット手術と遺伝子編集まで：治療におけるブレークスルー） ILAS Seminar-E2 :From Traditional Herbal Remedies to Robotics and Gene Editing: Breakthroughs in Medical Treatments	**Instructor's name, job title, and department of affiliation**	Graduate School of Medicine Assistant Professor,LUO YAN		
Group	Seminars in Liberal Arts and Sciences	**Number of credits**	2	**Number of weekly time blocks**	1
Class style	seminar (Face-to-face course)	**Year/semesters**	2024・First semester	**Quota (Freshman)**	12 (10)
Target year	Mainly 1st year students	**Eligible students**	For all majors	**Days and periods**	Wed.5
Classroom	23, Yoshida-South Campus Academic Center Bldg. North Wing			**Language of instruction**	English
Keyword	Healthcare / Medicine / Treatment / Technology / Therapy				

[Overview and purpose of the course]

This course offers an overview of cutting-edge scientific and technological innovations driving the forefront of modern medicine. Students will comprehend how breakthroughs in genetics, immunology, and other disciplines are reshaping the treatment of diseases. We will discuss the effectiveness assessment of these treatments and therapies. By critically evaluating clinical trials and evidence-based studies, students will grasp the significance of evidence in determining the viability of new medical interventions. At the same time, this course will put an emphasis on patients’ values and preferences in medical decision making. Students will recognize the importance of patient-centered care and the role patients play in shaping their own treatment paths. Ethical considerations surrounding new medical breakthroughs will also be explored. Additionally, students will be encouraged to envision the prospects and potential of future medicine.
The class incorporate lectures, presentations, and discussions to facilitate learning and engagement.

[Course objectives]

1.To explore the science and technology behind medical breakthroughs.
2.To recognize the significance of patient values and patient-centered care.
3.To understand and critically assess ethical challenges associated with scientific and technological advancements.
4.To enhance the skills of information collection, critical thinking and problem solving.
5.To acquire a general understanding of evidence-based medicine and informed decision making.

[Course schedule and contents)]

In principle, the course will be offered according to the following plan. The order and content may be subject to slight changes.

Week 1: Introduction - Overview of medical innovations
Week 2: Ancient wisdom - Traditional herbal remedies and alternative medicine

Continue to ILAS Seminar-E2 :From Traditional Herbal Remedies to Robotics and Gene Editing: Breakthroughs in Medical Treatments（漢方からロボット手術と遺伝子編集まで：治療におけるブレークスルー）(2/4)

Week 3: Battling bacteria - Antibiotics
Week 4-5: Preparing for infection - Vaccines
Week 6-7: Tackling cancer - Targeted therapy, stem cell therapy, and immunotherapy
Week 8-9: From barbers to robotics - Advancements in surgical techniques
Week 10-11: From dialysis to transplantation - Organ replacement therapies
Week 12: Life-saving innovations - Critical care technologies
Week 13: Genetic revolution: Gene editing and genetic therapies
Week 14: Minds transformed - From lobotomy to innovative psychiatric treatments
Week 15: Poster session
Week 16: Feedback

[Course requirements]

None

[Evaluation methods and policy]

Attendance and active participation - 50%
Presentation - 25%
Poster session - 25%

[Textbooks]

No textbook will be used. Materials will be provided in class or on PandA.

[References, etc.]

（References, etc.）

Materials will be provided in class or on PandA.

[Study outside of class (preparation and review)]

Students are expected to complete assignments after some lectures.

[Other information (office hours, etc.)]

Students may ask questions or request to schedule an in-person appointment via email.