科目ナンバリング	U-LAS13 20013 LE60						
授業科目名<英訳>	Organic Chemistry of Life-E2 Organic Chemistry of Life-E2			担当者所属職名・氏名	化学研究所　助教　SINGH, Vaibhav Pal		
群	自然科学科目群			分野(分類)	化学(発展)	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・前期	曜時限	金4	配当学年	主として1・2回生	対象学生	理系向

[授業の概要・目的]

This course is intended for Japanese and international students registered in science majors who are interested in generating their own ideas through creative thinking. It is particularly suited for students interested in pursuing graduate studies in chemistry, life sciences, medicine, pharmaceutical sciences, or agriculture.

Short video lectures are viewed by students at home before the class session, while in-class time is devoted to activities, brainstorming, or projects.

[到達目標]

This course covers revolutionary ideas from scientists that originated from the integration of chemistry and biology with a main focus on strategies for idea generation.

By the end of this course, you should be able to come up with your own ideas using various creative thinking strategies.

[授業計画と内容]

The following topics will be covered online or in the classroom:

Week 1: Why is Creativity Important?
Week 2: Creating Drug Constellations with Chemical Structures
Week 3: Building of a DNA Double Helix Structure
Week 4: Innovative Applications Derived from DNA/RNA
Week 5: Parallel Thinking with the 6 Thinking Hats Technique
Week 6: Creation of a New Product using the Idea Generator Tool
Week 7: Idea Generation based on Amino Acids and Proteins
Week 8: Ideas for Genetically Modified Organisms
Week 9: Fluorescence for Tracking Biology (Part 1)
Week 10: Fluorescence for Tracking Biology (Part 2)
Week 11: SCAMPER Method for Creating Revolutionizing Ideas
Week 12: Ideas for Fooling Sugars and Fats
Week 13: Creative Ways for Fighting Cancer and Viruses
Week 14: JeoPARODY - Wrapping up the Semester
Week 15: No Examination
Week 16: Feedback

[履修要件]

特になし

Organic Chemistry of Life-E2(2)へ続く↓↓↓

Organic Chemistry of Life-E2(2)

[成績評価の方法・観点]

Evaluation is based on attendance and active participation (20%), idea generation (50%), and activities (30%).

[教科書]

使用しない

[参考書等]

（参考書）

Links to online videos will be provided through LMS.

[授業外学修（予習・復習）等]

Students have to watch online videos (about 30 minutes per week) before attending the classes. Classroom activities will be based on the content of the online lectures.

[その他（オフィスアワー等）]

[主要授業科目（学部・学科名）]

理学部