科目ナンバリング	U-LAS70 10002 SE50						
授業科目名<英訳>	ILAS Seminar-E2 :Sustainable Food Production in the Era of Climate Change and the Role of Interdisciplinary Research（気候変動時代における持続可能な食料生産と学際的研究の役割） ILAS Seminar-E2 :Sustainable Food Production in the Era of Climate Change and the Role of Interdisciplinary Research			担当者所属職名・氏名	農学研究科　准教授 YASIR SERAG ALNOR MOHAMMED SERAG ALNOR		
群	少人数群	単位数	2単位	週コマ数	1コマ	授業形態	ゼミナール（対面授業科目）
開講年度・開講期	2026・前期	受講定員(1回生定員)	10 (10) 人	配当学年	主として1回生	対象学生	全学向
曜時限	水5	教室	共西01			使用言語	英語
キーワード	Sustainable food production / climate change / Stress resilience / Plant breeding						

[授業の概要・目的]

This course is designed to provide knowledge of food production and the challenges it faces under a changing climate. The students will learn about the concept of climate change and its effect on food production, the basics of plant breeding techniques, plant and environment interaction, sustainable food production, the role of plant breeding in climate change mitigation and resilience, the concept of integrated plant breeding, and how different knowledge can be integrated with plant breeding to provide solutions to the food security problems.

[到達目標]

Understand what plant breeding is and what climate change is
Understand the basics of plant environment interaction
Gain knowledge of the concept of sustainable food production
Understand the importance of an integrated research approach
Think about how to provide integrated solutions to sustainable food production

[授業計画と内容]

The following topics will be covered during the 14 weeks of the semester. Week 15 is an exam session, and a feedback class is given in week 16.

1. Definition of plant breeding and basic plant biology
2. Plant breeding and basic crop improvement techniques
3. Breeding in self-pollinated crops
4. Breeding in cross-pollinated crops
5. Modern techniques of plant breeding
6. Field designs and crop evaluation
7. Climate change and sustainable food production
8. Plant-environmental interaction
9. Plant-microbe interaction
10. Drought stress
11. Heat stress

12. Salinity stress
13. Sustainable agriculture techniques/approaches
14. General discussion and seminars

[履修要件]

特になし

[成績評価の方法・観点]

Grading: Class attendance and active participation (20%), assignments and quizzes (30%), and final exam or coursework (50%).

[教科書]

Not fixed
Introduced during class

[参考書等]

（参考書）
授業中に紹介する
Introduced during class
Handouts and supplemental readings will be distributed electronically and/or as a hard copy in class

[授業外学修（予習・復習）等]

Students should read or listen to the required pre-class materials and submit any required assignments before the class, and come to class ready to participate in class activities.

[その他（オフィスアワー等）]

No fixed office hours. Students are requested to make appointments directly or by email.

[主要授業科目（学部・学科名）]