

Subject	Current topics of Agricultural Plant Science (先端植物生命科学)	Day/Period	1 st quarter Wed./3 rd ~4 th	Object	AMB/JYPE
Instructor (Post)	Y. Kanayama (Prof.) et al.	Categories	Specialized Subjects	Preferable Participants	3rd & 4th-year & AMB students
Position	Faculty of Agriculture (Graduate School of Agricultural Science)			Credits	2
				Semester	7 and 9
Subject Numbering	ABS-PLA358E			Language Used in Course	English
1. Class subject Professors and associate professors in Course of Plant Science introduce current topics of agricultural plant science.					
2. Object and summary of class The purpose of this class is to enhance students' interests on crop science, horticultural science, soil science, plant pathology, plant breeding and genetics, insect science and bioregulation, environmental plant biotechnology, environmental crop science and forest ecology.					
3. Keywords Crop, Plant, Soil, Insect, Microorganisms.					
4. Goal of study The goal of this course is for students to understand and broaden the knowledge of agricultural plant science, and to have great interests in our studies on plant production science, environmental plant biotechnology, and applied plant science. Students will want to study in our course of Graduate School of Agricultural Science.					
5. Contents and progress schedule of class Each week there will be lectures and discussions of the following topics: 1) Introduction (Prof. Kanayama) Horticultural science: Functional properties of fruit and vegetable crops (Assoc. Prof. Kato) 2) Crop science-1: Climate change impact on crop production (Prof. Homma) 3) Crop science-2: Crop physiology and production (Assoc. Prof. Kameoka) 4) Plant pathology-1: Virus infection and plant immune system (Prof. Takahashi) 5) Plant pathology-2: Variety of plant pathogens and plant immunity (Assoc. Prof. Ando) 6) Plant breeding and genetics-1: Nanohana-Project (Prof. Kitashiba) 7) Plant breeding and genetics-2: Molecular mechanism of self-incompatibility (Assoc. Prof. Yamamoto) 8) Soil science: Soil science on the risk alleviation methods for heavy metal contamination in soil and rice (Prof. Makino) 9) Applied Entomology (Prof. Hori) 10) Environmental plant biotechnology-1: Introduction of genetically modified plants (Prof. Toriyama) 11) Environmental plant biotechnology-2: Genetics and genetic engineering of plants (Assoc. Prof. Ito) 12) Environmental crop science-1: Soil management and productivity (Prof. Nishida) 13) Environmental crop science-2: Role of plant roots in crop production and environmental impacts (Assoc. Prof. Tajima) 14) Forest ecology-1: Forest molecular ecology (Prof. Suyama) 15) Forest ecology-2: Forest microbial ecology (Assoc. Prof. Fukasawa)					
6. Preparation Briefly understand each field on the website below.					
7. Record end evaluation method Attendance (30%), class participation (30%), and report (40%).					
8. Textbook and references http://www.agri.tohoku.ac.jp/en/about/organization/faculty/index.html					
9. Self study Study the above website in detail and understand the contents of research in each field. If you want to study in more detail, ask each faculty for reference books.					
10. In addition Contact: Prof. Yoshinori Kanayama E-mail: yoshinori.kanayama.a7@tohoku.ac.jp Office: Room E306					