

Course	Agro-Biomedical Science Laboratory Seminar I
Course No.	
Credits	1 Credit
Grade	1 Year
Timetable	Fall AB by appointment
Instructor	Yoshito Kumagai, Masahiro Akiyama, Masao Ichikawa, Osamu Ohneda, Masayuki Matsumoto, Kazuya Morikawa, Ryosuke Ohniwa, Yoshihiro Okabe, Hiroshi Ezura, Chiaki Matsukura, Yuichi Yamaoka, Junichi Peter Abe, Yutaka Kitamura
Course Overview	In this course, students attend laboratory seminar of at least one instructor, and read the latest academic publications related to Food and Health, thoroughly understanding their research objectives, methodologies and results, then discuss the significance of the studies, problem areas, and remaining areas for further study. In some cases, it may be possible for students to similarly approach Innovation-related issues in another form than academic article. The instructors from University of Tsukuba will nurture the fundamentals of Health and Food sciences, evaluating biotic effects and safety of substances, etc.
Remarks	Conducted in English. For students of International Joint Degree Master's Program in Agro-Biomedical Science in Food and Health.
Course Type	Seminars
Link between Course Objectives and Activities	To nurture the fundamentals (scientific basis and its implementation) for Agro-Biomedical Science such as ability to connect health and food resources, abilities to connect engage in issues related health security, and ability to engage food security.
Academic Goal	<ol style="list-style-type: none"> 1. To be able to survey the research topics of instructors. 2. To be able to select the appropriate articles for their reading through use of major scientific publications and online search systems from available recent publications in the field. 3. To be able to read and understand the selected articles, and summarize them to other students within a set allotment of time. 4. To be able to listen and understand article presentations made by other students and discuss the significance of the research and any points of uncertainty that arise from it. 5. To be able to describe/explain the significance of each article from the standpoint of Agro-Biomedical Science.
Course Schedule	<p>Students need to attend at least 10 times seminar hosted by the following instructors. Students can chose the number of instructors if necessary. Students have to present at least one article selected by themselves in the 10 times seminar.</p> <p>Theme 1: Environmental medical science (Yoshito Kumagai, Masahiro Akiyama) Theme 2: Global health (Masao Ichikawa) Theme 3: Stem cell biology (Osamu Ohneda) Theme 4: Neurophysiology (Masayuki Matsumoto) Theme 5: Bacterial genetics (Kazuya Morikawa) Theme 6: Molecular microbiology (Ryosuke Ohniwa) Theme 7: Plant molecular breeding (Yoshihiro Okabe) Theme 8: Molecular genetics and breeding (Hiroshi Ezura) Theme 9: Plant physiology (Chiaki Matsukura) Theme 10: Plant parasitic mycology (Yuichi Yamaoka) Theme 11: Mycorrhizal fungi (Junichi Peter Abe) Theme 12: Food and Biomass Engineering (Yutaka Kitamura)</p>
Course Prerequisites and Advisories	
Grading Philosophy (Percentage/ Criteria/ Methodology)	<p>Class participation (50%), presentation and discussion about the paper (25%), and report (25%).</p> <p>Report theme is "Summary of the paper you introduce (one paper is enough), and its relation with global topics in Agro-Biomedical Science".</p> <p>Grading Criteria is A+ (Superior), A (Excellent), B (Good), C (Average) and D (Failure).</p>

	Grade C is for students who are be able to select articles for their presentation and report, and are also able to understand both the summary of paper/patent and the significance of the corresponding academic field. Grade B is for students who satisfy the criteria of grade A, and are able to have a constructive discussion in the seminar. Grade A is for students who satisfy the criteria of grade B, and understand the meaning of the paper/patent in terms of Agro-Biomedical Science. In addition, if a student is considered to be able to be extremely brilliant by accomplishing their goal comprehensively, he/she can get Grade A+.
Self-Directed Learning Other Than Coursework	Address issues introduced by instructors in the class room.
Textbooks, References and Supplementary Materials	Distributed by instructors in class
Office Hours	<p>Name: Yoshito Kumagai E-mail: yk-em-tu@md.tsukuba.ac.jp</p> <p>Name: Osamu Ohneda E-mail: oohneda@md.tsukuba.ac.jp</p> <p>Name: Masao Ichikawa E-mail: masao@md.tsukuba.ac.jp</p> <p>Name: Masayuki Matsumoto E-mail: mmatsumoto@md.tsukuba.ac.jp</p> <p>Name: Kazuya Morikawa E-mail: morikawa.kazuya.ga@u.tsukuba.ac.jp</p> <p>Name: Ryosuke Ohniwa E-mail: ohniwa@md.tsukuba.ac.jp</p> <p>Name: Yoshihiro Okabe E-mail: okabe.yoshihiro.gp@u.tsukuba.ac.jp</p> <p>Name: Hiorshi Ezura E-mail: ezura@gene.tsukuba.ac.jp</p> <p>Name: Chiaki Matsukura E-mail: matsukura.chiaki.fw@u.tsukuba.ac.jp</p> <p>Name: Yuichi Yamaoka E-mail: yamaoka.yuichi.gp@u.tsukuba.ac.jp</p> <p>Name: Junichi Peter Abe E-mail: abe.junichi.p.gn@u.tsukuba.ac.jp</p> <p>Name: Yutaka Kitamura E-mail: kitamura.yutaka.fm@u.tsukuba.ac.jp</p> <p>By appointment only</p>
Other (i.e. Expectations on Classroom, Conduct and Decorum etc.)	In the seminar, students are expected to join in the discussion.
Related Courses	<p>Research and Development for Agro-Biomedical Science I</p> <p>Agro-Biomedical Science Laboratory Seminar II</p> <p>International Scientific Seminars</p>
Keywords	Paper presentation, Paper discussion