

Category (科目区分)	Cluster of Biofunctional Systems		
Course Title (授業科目名)	Immunology and allergology		
Instructors (担当者名)	Shigeharu Ueki	Academic Year (配当年次)	1
Required Course / Elective Course (必修/選択)	Elective Course	Credits (単位数)	1
Class Format (授業形態)	Lecture		
Schedule (開講期間)	Students will be notified by email after completing the course registration.		
Class Date/Period (開講曜日・時間)	Students will be notified by email after completing the course registration.		
Course Outline/ Course Objectives (授業の概要・到達目標)			
Objectives of the class:to understand the methodology for developing biomarkers for clinical issues related to immunological, allergic, and inflammatory diseases based on molecular findings.			
Objectives of the class:to be able to understand and explain the above.			
Outline of the class:			
1. Research preparation: tips for starting a research project will be outlined.			
2. Immunology and allergology, molecular mechanism of cell activation :learn about immunology and inflammation relevant to clinical research, including actual cases and research results.			
3. Exploring biomarkers in immune and allergic diseases :to understand biomarkers that are effective in diagnosing and determining the severity of autoimmune and allergic diseases, based on actual cases and research results.			
Through lectures, students will learn about effective biomarkers for diseases and their importance.			
Course Planning (授業計画)			
	Course Outline/ Course Objectives (授業の概要及び到達目標) (Contents of Class) ((授業内容))	Instructor (担当教員名)	Department (講座名) Class Room [実施場所]
1	Introduction to research activities: tips	Shigeharu Ueki	Department of General Internal Medicine and Clinical Laboratory Medicine [Office or Web]
2			
3	Understanding the basics of allergic reactions	Shigeharu Ueki	
4			
5	Understanding the origins of inflammation.	Shigeharu Ueki	
6			
7	Understanding the reality of biomarker development	Shigeharu Ueki	
8			
9	Summary	Shigeharu Ueki	
Grading Criteria (成績評価の基準と方法)			
The evaluation will be based on the attendance and the submitted reports.			
Contact Information (問い合わせ先(氏名, メールアドレス等))			
Name: Shigeharu Ueki / E-mail: shigeh@hos.akita-u.ac.jp			
Coment (その他特記事項)			
Course Information: Common subject with the Inflammation and Immunology cluster “Immunology and Allergy, Practical Training”. If you are a working graduate student and cannot attend the practical training due to your work schedule, we will adjust the schedule.			
Textbooks and references: materials will be distributed as necessary.			
Learning contents in self-study: preparatory study according to the class contents is recommended.			