

<b>Category</b> (科目区分)	Basic subjects		
<b>Course Title</b> (授業科目名)	Biomolecule quantification technology		
<b>Instructors</b> (担当者名)	Masamitsu Tanaka	<b>Academic Year</b> (配当年次)	1
<b>Required Course / Elective Course</b> (必修/選択)	Elective Course	<b>Credits</b> (単位数)	1
<b>Class Format</b> (授業形態)	Remote or Webclass		
<b>Schedule</b> (開講期間)	Students will be notified by email after completing the course registration.		
<b>Class Date/Period</b> (開講曜日・時間)	Students will be notified by email after completing the course registration.		
<b>Course Outline/ Course Objectives</b> (授業の概要・到達目標)			
<p>Purpose of class: The purpose of the lesson is to understand how to quantify various cellular components.  Achievement goal of class: In addition to quantification methods for proteins and nucleic acids that constitute living organisms, the goal is to learn and practice specific quantification methods for biological functional molecules</p>			
<b>Course Planning</b> (授業計画)			
	<b>Course Outline/ Course Objectives</b> (授業の概要及び到達目標) <b>(Contents of Class)</b> (授業内容)	<b>Instructor</b> (担当教員名)	<b>Department</b> (講座名) <b>Class Room</b> [実施場所]
1	Colorimetric protein quantification	Professor Masamitsu Tanaka	Molecular Medicine and biochemistry
2	ELISA principle		
3	Quantitative techniques for determining apoptosis		
4	Quantification of extracellular vesicles		
5	Cytokine quantification technology		
6	Quantitative measurement of nucleic acids (DNA, RNA)	Lecturer: Daisuke Yasuda	Immunology
7	Principles of RT-qPCR		
8	Quantitative measurement of second messengers (intracellular Ca ions and cAMP)		
9	Quantitative analysis of western blotting images		
10	Quantitative analysis of histological images using Image J		
<b>Grading Criteria</b> (成績評価の基準と方法)			
30 hours of remote or Web class + 15 hours of self-study, 45 hours in total is counted as 1 credit, attendance status, the results of the oral and written examinations and the contents of the submitted report will be taken into consideration to evaluate.			
<b>Contact Information</b> (問い合わせ先(氏名, メールアドレス等))			
Name: Masamitsu Tanaka / E-mail: mastanak@med.akita-u.ac.jp Daisuke Yasuda / E-mail: dyasuda@gipc.akita-u.ac.jp			
<b>Comment</b> (その他特記事項)			
Information about the course: If you cannot attend the training due to work, we will adjust the schedule. Textbooks / References: Distribute materials as needed. Alternatively, specify the document. Self-study content during self-study time: It is desirable to carry out preparatory learning according to the goals to be achieved and the content of the lesson.			