

Category (科目区分)	Cluster common basic subjects		
Course Title (授業科目名)	Basic Medical Technology "Principles and Practice of Immunohistochemistry"		
Instructors (担当者名)	Yoshio Bando	Academic Year (配当年次)	1, 2
Required Course / Elective Course (必修/選択)	Elective Course	Credits (単位数)	1
Class Format (授業形態)	Lecture and Experimental practice		
Schedule (開講期間)	October, 2025 – March, 2026		
Class Date/Period (開講曜日・時間)	Every Wednesday and Thursday from 18:00 to 21:30 (details of the schedule to be informed later)		
Course Outline/ Course Objectives (授業の概要・到達目標)			
<p>Objectives: Morphology is a discipline based on observation with the eyes. The amount of information provided by vision is very large, and its importance has increased even in the present day when molecular biology has become the mainstream. In this course, we will discuss how to identify the histological localization of target molecules. To achieve our goal, we will learn the basic principles and techniques of immunohistochemistry, which can visualize the histological localization of target molecules.</p> <p>Objectives: To understand the principles of immunohistochemistry and to master the basic techniques.</p> <p>Outline of the course:</p> <ol style="list-style-type: none"> 1. Outline the basic principles of immunohistochemistry 2. Outline the basic techniques of immunohistochemistry 3. Learn perfusion, fixation and tissue collection. 4. Learn embedding method 5. Learn section preparation 6. Perform immunohistochemistry 7. Image acquisition 8. Data analysis. 			
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	Outline the basic principles of immunohistochemistry	Prof. Yoshio Bando Associate Prof. Ryoji Suzuki	Dept. of Anatomy [laboratory]
2	Outline the basic techniques of immunohistochemistry		
3	Learn perfusion, fixation and tissue collection		
4	Learn embedding method		
5	Learn section preparation		
6	Perform immunohistochemistry (1)		
7	Perform immunohistochemistry (2)		
8	Image acquisition (1)		
9	Image acquisition (2)		
10	Data analysis		
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: Yoshio Bando / E-mail: ybando@med.akita-u.ac.jp			
Comment (その他特記事項)			
<p>Information : For working graduate students and others who cannot attend the practical training due to work, we will adjust the schedule as possible as we can. Textbooks and reference materials: Materials will be distributed as necessary.</p> <p>Self-study time: It is desirable to do preparatory study according to the achievement goal and class content.</p>			