	<mark>Category</mark> (科目区分)	Cluster of Neuroscience System			
<mark>Course Title</mark> (授業科目名)		Ion channels and neurological function $/$ experimental practice			
<mark>Instructors</mark> (担当者名)		Tomohiro Numata	<mark>Academic Year</mark> (配当年次)	1	
Required Course / Elective Course (必修/選択)		Elective Course	<mark>Credits</mark> (単位数)	1	
<mark>Class Format</mark> (授業形態)		experimental practice			
<mark>Schedule</mark> (開講期間)		Students will be notified by email after the course registration is complete.			
Class Date/Period (開講曜日•時間) Students will be notified by email after the course registration is complete.					
Course Outline/ Course Objectives (授業の概要・到達目標)					
Class purpose: Understand the latest research articles on ion channel areas based on basic knowledge as a medical student. Class Achievement Goal: To acquire extensive knowledge to understand the essence of the latest research papers related to ion channels.					
Course Planning (授業計画)					
		-/ Course Objectives(授業の概要及び到達目標) hts of Class)    ((授業内容))	<mark>Instructor</mark> (担当教員名)	Department (講座名) Class Room 〔実施場所〕	
1	Features of Na	ures of Na + channels			
2	Features of Ca+	-+ channels	Tomohiro Numata	Department of Integrative Physiology [ Reserch Building for	
3	Features of Pie	zo channels			
4	Features of TR	<sup>o</sup> channels			
5	Neurotransmitte	ers and ion channels			
6	Signal transduct	action mechanism of endocrine cells Basic Medicin Seminar F			
7	Neural mechanis	sm of neurological disorders			
8	Neural mechanis	sm of neurological disorders			
9	Neural mechanis	sm of metabolic disorders			
		sm of metabolic disorders			
Grading Criteria (成績評価の基準と方法)					
Thirty hours of practical training and 15 hours of self-study in the seminar room, a total of 45 hours, will be used for one unit. Grades will be considered by attendance, examination results, and reports.					
Contact Information (問い合わせ先(氏名, メールアドレス等))					
Name: Prof. Tomohiro Numata / E-mail: numata@med.akita-u.ac.jp					
<mark>Comment</mark> (その他特記事項)					
Information about courses: If you cannot attend the training due to work, such as working graduate students, we will adjust the schedule, including remote lectures and discussions. We accept participation not only from the medical field but also from a wide range of fields.					
Textbooks / References: Textbooks / References: "Standard Physiology" Igaku-Shoin					