

Cluster (クラスター)	Cluster of Neuroscience System		
Course Title (授業科目名)	Neurosrgery, exercise		
Instructors (担当者名)	Hiroaki Shimizu	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, Exercise		
Schedule (開講期間)	To be anounced by e-mail		
Class Date/Period (開講曜日・時間)	18:00～21:30, every Wednesday (this can be changed by request)		
Course Outline/ Course Objectives (授業の概要・到達目標)			
Purpose of this course: To learn ;basic science and clinical status in subspecialties such as cerebrovascular diseases, brain tumors and brain trauma, etc..			
Course Objectives: To usnderstand basic neuroscience, cerebrovascular diseases, brain tumors and brain trauma, etc..			
Course Outline:			
1, 2. Pathophysiology and treatment of ischemic cerebrovascular disease.			
3, 4. Mechanisms of development and enlargement, and treatment of cerebral aneurysms and arteriovenous malformations			
5, 6.Recent advancement in benign brain tumors.			
7, 8.Recent advancement in mlignant brain tumors.			
9, 10 Streotactic radiosurgery			
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	Current clinical practice and reasearch in ischemic cerebrovascular disease	Hiroaki Shimizu	Department of Neurosurgery [Conference room]
2			
3	Current clinical practice and reasearch in hemorrhagic cerebrovascular disease	Syuntaro Togashi	
4			
5	Recent advancement in benign brain tumors and streotactic radiosurgery.	Masataka Takahashi	
6			
7	Recent advancement in malignant brain tumors	Takahiro Ono	
8			
9	Current clinical practice and reasearch in cerebral endovascular surgery	Takatsugu Abe	
10			
Grading Criteria (成績評価の基準と方法)			
A total of45 hours (30 hours of lecture and 15 hours of self leaning) makes credit of 1. Students will be evaluated based on attending attitude, oral and written tests and reports.			
Contact Information (問い合わせ先(氏名, メールアドレス等))			
Name:Hiroaki Shimizu / E-mail: nshrk@med.akita-u.ac.jp			
Coment (その他特記事項)			
Please feel free to contact the instructor whenever you have difficulty in schedule etc.			
References/text books: No-shinkei gaka (Kinpodo), etc.			
Please make a self-learning besides the lectures according to the syllabus.			