Category (科目区分)	Research subject		
Course Title (授業科目名)	Orthopedic surgery		
<mark>Instructors</mark> (担当者名)	Naohisa Miyakoshi	Academic Year (配当年次)	2,3
Required Course / Elective Course (必修/選択)	Elective Course	Credits (単位数)	15
Class Format (授業形態)	Lecture and practical training		
Schedule (開講期間)	We will contact students via email after course registration is completed		
Class Date/Period (開講曜日 · 時間)	We will contact students via email after course registration is completed		

## Course Outline/ Course Objectives (授業の概要・到達目標)

Purpose of class: The purpose of this class is to learn the technical knowledge and skills necessary for conducting experiments, giving presentations at conferences, and writing papers.

Course Outline: The goal of this course is to obtain a degree after publishing a paper in an academic journal and passing a degree examination.

Course Objectives: This course aims to provide students with a deeper insight and understanding of the pathophysiology and treatment of musculoskeletal disorders (diseases of the limbs and spine). In particular, we will provide instruction and practical training on the following research topics that have been continuously conducted in our department.

- 1. Elucidation of the pathogenesis of various metabolic bone diseases and development of new treatment methods.
- 2. Elucidation of the pathogenesis of various bone and soft tissue tumors and development of new treatment methods.
- 3. Application of biomaterials for orthopaedic field.
- 4. Biomechanical simulation to elucidate the pathogenesis of musculoskeletal disorders.
- 5. Rehabilitation using functional electrical stimulation for paralysis.
- 6. Operation of medical robots in rehabilitation.

## Contact Information (問い合わせ先(氏名, メールアドレス等))

Name: Department of Orthopedic Surgery / E-mail: seikei@doc.med.akita-u.ac.jp

## Coment (その他特記事項)

Information about courses: If you cannot attend the training due to work, such as a graduate student who is a member of society, 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.