

Course Name	Medical Device and Biomaterials		
Semester, Year	First Semester, 2019 (Summer Term)	Number of Credits	1 credit
Course level	5000	Course Number	027029
Instructor(s) (Institution)	Katsuhiko SASAKI 大学院工学研究院		
Course Objectives	Understand roles of collaborations between medical practice and mechanical engineering through learning medical devices and strength of mechanical materials and biomaterials.		
Course Goals	Understanding the close relationship between medical practice and mechanical engineering. Differences in characteristics of deformation behavior of biomaterials and engineering materials are, especially, understood. Viscoelastic behavior, which is one of characteristic deformation of biomaterials, are also understood from both micro and macroscopic point of view.		
Course Schedule	1.Introduction of the lecture 2.Biomaterial as composite material -Introduction of composite materials -Deformation of composite materials 3.Inelastic deformation -Viscoelastic deformation -Plastic deformation -Viscoplastic deformation 4.Shape memory alloy -Mechanism of shape memory alloy		
Homework	Within ordinary preparation and brushup		
Grading System	Evaluation is conducted considering assignments or exam.		
Textbooks / Reading List			
Websites			
Website of Laboratory			
Additional Information	Texts are not used. Prints will be distributed. [Important!]Knowledge of "Material Strength for Mechanical Engineering" is required.		