

BiS 200

Prof. Doheon Lee
Prof. Jaeseung Jeong
Prof. Je-Kyun Park

Spring 2006

Room 219, E16 Building
Mon, Wed 10:30-12:00
<http://biosys.kaist.ac.kr>

BiS 200 Introduction to Bioinformation and Bioelectronics

Synopsis

This course discusses basic knowledge for interdisciplinary research area among biology, medicine, information science, electronics and mechanical engineering. This course also provides common tools for scientific understanding of biological mechanism, analysis of organism structures, and fundamentals of life. Basic theory and tool for recognition and detection, analysis and treatment, control and handling, storage and usage of biomaterials and bioinformation are discussed.

Credit

3 units (3:0:3)

Prerequisite

None

Grading

Relative grading (A: 30%, B: 40%, C: 20%, D: 10%)

Homework 45 points (15 points x 3),

Quiz & Exam 60 points (20 points x 3)

Office Hours

Mon, Wed 13:00-14:30 Doheon Lee (Tel:4316, doheon@kaist.ac.kr)

Mod, Wed 13:00-14:30 Jaeseung Jeong (Tel:4319, jsjeong@kaist.ac.kr)

Mon, Wed 13:00-14:30 Je-Kyun Park (Tel:4315, jekyun@kaist.ac.kr)

Teaching Assistants

Part I: TBA

Part II: TBA

Part III: Seong-Sik Jo, Wonjae Choi, Wonhye Lee

Textbook

BiS200 Course Handbook (2006)

BiS 200 Introduction to Bioinformation and Bioelectronics

Prof. Doheon Lee, Jaeseung Jeong, and Je-Kyun Park

Spring 2006

Lecture Schedule

Week	Topics	Contents	Instructors
1	Introduction	Course Outline/Gene and Human	<i>D. Lee</i> 3/6, 3/8
2	Part I	Gene and Computer	<i>D. Lee</i> 3/13, 3/15
3		DNA Chip	<i>D. Lee</i> 3/20, 3/22
4		Systems Biology	<i>D. Lee</i> 3/27, 3/29
5		Bio-Computing/ Exam #1	<i>D. Lee</i> 4/3, (4/5)
6		Overview of Neuro-engineering	<i>J. Jeong</i> 4/10, 4/12
7	Part II	Bio-signal processing	<i>J. Jeong</i> 4/17, 4/19
8		<i>Midterm Examination Period (No Class)</i>	
9		Biomedical Imaging	<i>J. Jeong</i> 5/1, 5/3
10		Brain-computer Interface	<i>J. Jeong</i> 5/8, 5/10
11		Artificial Brain/ Exam #2	<i>J. Jeong</i> 5/15
12	Part III	Ubiquitous Healthcare / Bio-Convergence	<i>J.-K. Park</i> 5/17
12		MEMS/ NEMS	<i>J.-K. Park</i> 5/22, 5/24
13		Biosensors and Bioelectronics	<i>J.-K. Park</i> 5/29, 5/31
14		Microfluidic Device and Lab-on-a-chip	<i>J.-K. Park</i> 6/4, 6/7
15		Nanotechnology/ Exam #3	<i>J.-K. Park</i> 6/12, 6/14
16	<i>Final Examination Period (No Class)</i>		