Spring 2013

EE563

Selected Topics in Electrical Engineering: Flow Cytometry Data Analysis

Syllabus

Meeting times	**:** Friday13:30, 14:30, 15:30
Text	**:** Marion G. Macey, ed., "Flow Cytometry: Principles and Applications," Springer, 2007
Instructor	**:** Bilge Karaçalı, PhD
Office	**:** EEE Building Room 209
Phone	**:** 6534
E-mail	**:** bilgekaracali@iyte.edu.tr

Summary:
Principles of flow cytometry; Cell preparation; Fluorochromes and fluorescence; Experimental design and fluorescence quantitation; Cell sorting; Compensation; Statistical analysis: Probability binning; Data analysis using machine learning. Readings on flow cytometry data analysis.

Course Outline:
Week 1: Introduction to flow cytometry
Week 2: Fluorochromes and fluorescence
Week 3: Experimental design and fluorescence quantitation
Week 4: Compensation and gating
Week 5: Normalization
Week 6: Comparing Univariate Cell Distributions
Week 7: Probability Binning
Week 8: Readings on flow cytometry data analysis
Week 9: Readings on flow cytometry data analysis
Week 10: Readings on flow cytometry data analysis
Week 11: Readings on flow cytometry data analysis
Week 12: Readings on flow cytometry data analysis
Week 13: Readings on flow cytometry data analysis
Week 14: Overview

Grading:

Class Participation	50%
Project	50%