MAT 416/516 Biomaterials Science and Biocompatibility
(Spring 2023)

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Lecture Hours: Thursday: 14.40 -16.30
Friday: 12.40 -13.30

Zoom link: https://sabanciuniv.zoom.us/j/98675997754

Requirements:

MAT 416:
1 Midterm (25% each)
Group Project (25%)
Final Exam (50%)

MAT 516:
1 Midterm (20% each)
Group Project (30%)
Final Exam (50%)

Resources:

I. Biomaterials, A Basic Introduction (Q. Chen, G. Thoukas)
II. Introduction to Biomaterials (Agrawal, Ong et al)
III. Biomaterials: An Introduction (Park, Lakes)
IV. Biomaterials Science (Ratner et al.)
V. Handbook of Biomaterial Properties (Murphy, Black et al.)

Academic Integrity Policy:

If acts of violations of academic integrity (copying/returning someone else's work, attending classes/exams on behalf of other people, using resources other than allowed during online exams etc) detected, all parties involved will receive zero grades from that assignment and disciplinary actions will be taken.

Grading Policy:

Course grades will be based on the curve system. Minimum of 10% (of the max grade for that item) from each grading item will be required to pass the course.

Tentative Syllabus (Exam dates may change)

Week 1: Introduction

Week 2-3: Basic Properties

Week 4: Body response to biomaterials

Week 5-6: Metals

Week 7-8: Ceramics

Week 9: Midterm

Week 10: Polymers

Week 11: Composites

Week 12: Natural Biomaterials

Week 13: Strategies for biocompatible implants

Week 14: Project presentations