THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Extracellular Matrix in Bioengineering

BIOMEDE 6350

Credit Hours:
3.00

Course Levels:
Graduate

Course Components:
Lecture

Course Description:
Extracellular matrix (ECM) present in mammalian tissue(s) is important for the integrity and tensile strength of the underlying tissue as well as for cell-matrix interactions and matrix mineralization. This course provides an overview of the composition, structure and function of ECM and its application(s) in bioengineering.

Prerequisites and Co-requisites:
Pre-Req: Grad standing in MECHENG or BIOMEDE, or permission of instructor

Course Goals / Objectives:
- Describe the ECM components and organization present in various mammalian tissues
- Other ECM components: collagen receptors, proteoglycans and GAGs, elastin, laminin etc
- Techniques to characterize ECM composition, structure and function
- ECM in health and disease and bioengineering applications

Course Topics:
- Collagen
- Other ECM components
- ECM Tools and Techniques
- ECM Applications

Designation:
Elective