Tissue Engineering
(14TISSEGRM)

Description
The minor in Tissue Engineering is intended to provide graduates with the knowledge base and practical skills that will prepare them to quickly contribute to research and manufacturing of devices designed for repair and replacement of tissues and organs. Interested students should contact the BME Student Services Coordinator for information and application materials.

Requirements
- Complete a minimum of 23 credit hours of designated courses. All courses required for the minor must be completed with a C- or better.
- To be admitted to the minor in Tissue Engineering, they will need to complete two prerequisite courses, CH 223 and BIO 183 with a C- or better.

Required Courses
- BME 484 Tissue Engineering Fundamentals
- BIT 410 Manipulation of Recombinant DNA
- BIT 466 Animal Cell Culture
- BME 483/BEC483 Tissue Engineering Fundamentals
- BME 498 Undergraduate Research in Biomedical Engineering

All students must complete one course in thermodynamics from the following list:
- MAE 301 Thermodynamics
- MSE 301 Introduction to Thermodynamics of Materials
- CHE 315 Chemical Process Thermodynamics
- TE 303 Thermodynamics for Textile Engineers

All students must complete one course in fluid mechanics, transport, solid mechanics or polymer engineering:
- MAE 308 Fluid Dynamics
- CE 382 Hydraulics
- CHE 311 Transport Solid Mechanics
- MAE 314 Solid Mechanics
- CE 313 Mechanics of Solids
- TE 463 Polymer Engineering
- TE 466 Polymeric Biomaterials Engineering

Elective Courses
There are no elective courses in this minor.

Admissions and Certification of Minor
The BME staff will hold primary responsibility for administration of the Minor in Tissue Engineering. Information about the minor and application materials will be handled by the BME student services coordinator. BME faculty members will serve as advisors for the minor.

Contact Person

Lesley Hubbard
Engineering Building 3
Room 4014
919.515.6732
Lesley_hubbard@ncsu.edu

Effective Date: 6/2009

SIS Code: 14TISSEGRM