College of Engineering

424 Biomatertials and Biocompatibility
Spring, 3(3-0) Interdepartmental with Materials Science and Engineering. Administered by Department of Chemical Engineering and Materials Science. P:M: (PSL 250 and MISE 250) SA: MRM 424

441 Tissue Mechanics
Spring of odd years, 3(3-0) Interdepartmental with Materials Science and Mechanics. Administered by Department of Materials Science and Mechanics. P:M: (MSM 211) Application of solid mechanics to understanding mechanical responses of biological tissues. Microstructure and biological function for soft and hard connective tissues and muscle.

BIOSYSTEMS

ENGINEERING

BIOSYSTEMS

ENGINEERING

College of Agricultural Engineering

130 Engineering Design Fundamentals for Biological Systems
Fall. 2(1-2) P:M: (MTH 132 or concurrently or MTH 116 or concurrently or MTH 116 or concurrently or LBS 117 or concurrently or LBS 118 or concurrently or MTH 152H) Professional and fundamental methods of biosystems engineering. Basic engineering methods. Analysis and design. Interdisciplinary design.

230 Principles of Biosystems Engineering
Fall. 3(3-0) P:M: (MTH 132 or MTH 152H or LBS 118) Concepts of biosystems. Hard and soft systems. Conceptual and computer modeling of components of biosystems.

232 Food Production and Processing Systems
Fall. 1(0-2) Crop and animal production systems. Food processing systems. Field trips required.

329 Fundamentals of Food Engineering
Spring, 3(3-0) Interdepartmental with Food Science. P:M: (FSC 229) and (MTH 126 or LBS 118) and (PHY 231 or LBS 164) RB: (FSC 211) SA: FE 329 Unit operations in food industry: fluid mechanics, heat transfer, rates processes, refrigeration, freezing, and dehydration. Thermal process calculations.

331 Machinery Principles in Biosystems Engineering
Fall. 2(3-0) P:M: (BS 235 or MTH 255H or LBS 220) and (MTH 206 or MTH 211 or concurrently) and (CE 321) RB: Upper division standing in the College of Engineering. Functional processes of machines used in biosystems engineering, including pumping, blowing, conveying, mixing, separation, atomization, size reduction and mobility. Power requirements, efficiency and failure modes.

337 Machinery Systems for Food Processing
Spring. 3(3-0) P:M: (BE 230) and (LBS 220 or concurrently or MTH 235 or concurrently or MTH 255H or concurrently or MTH 152H) Principles of design, operation, and performance of equipment for processing raw materials into finished or intermediate products.