# APPENDIX IV

## Course Descriptions

**Principles of Biomedical Engineering Core Courses:**

**BMEG 605: Principles of Biomedical Engineering I: Molecular and cellular systems (3)**
The goal of this two-semester sequence is to develop a firm foundation for and fundamental knowledge of Biomedical Engineering with a multi-scale approach. The first course introduces fundamental concepts of molecular and cellular physiology, applies quantitative engineering analysis to physiology at this length scale, and teaches students to think critically about the physiology and cell biology literature. PREREQ: General Physiology (e.g., BISC 306)

**BMEG 606: Principles of Biomedical Engineering II: Tissue and organ systems (3)**
The goal of this two-semester sequence is to develop a firm foundation for and fundamental knowledge of Biomedical Engineering with a multi-scale approach. The second course introduces fundamental concepts of tissue and organ physiology, applies quantitative engineering analysis to physiology at this length scale, and teaches students to think critically about the organ function literature, such as musculoskeletal, cardiovascular, pulmonary, and nervous systems. Will allow BISC 606 as a substitute (see Elective Courses). PREREQ: General Physiology (e.g., BISC 306)

**Advanced Math Core Courses:**

**MATH 607 Survey of Scientific Computing (3)**
Numerical solution of linear systems; interpolation; differentiation and quadrature; transforms/FFT; nonlinear equations; initial value problems; boundary value problems; Monte Carlo methods; finite difference methods for partial differential equations. Additional topics at the discretion of the instructor. PREREQ: Linear algebra, differential equations, multivariable calculus.

**MATH 616 Introduction to Applied Mathematics I (3)**
Introduction to ideas and techniques used in solving problems arising in a variety of physical settings. Stability of nonlinear systems of ODE's. Sturm-Liouville problems and Green's functions. The wave, heat and Laplace equations. Elementary analysis of some nonlinear PDE's. Elementary perturbation theory. PREREQ: One semester of advanced calculus

**MEEG 690 Intermediate Engineering Mathematics (3)**
Linear algebra: generalized vector space, eigenvalue problem, diagonalization, quadratic forms. Field theory: divergence theorem, Stokes' theorem, irrotational fields. Sturm-Liouville theory, Bessel functions, Legendre polynomials. Partial differential equations: diffusion and Laplace equations by separation of variables and Sturm-Liouville theory, wave equation. Engineering applications.

**Statistics Core Courses:**

**BISC 643 Biological data analysis (3)**
Single-semester introduction to the numerical analysis of biological data in fields such as molecular and cellular biology. Emphasis on choosing and using the correct analysis method for each experiment by using small numbers of relatively simple statistical tests.

**STAT 608 Statistical Research Methods (3)**

Experimental design and plot plans, collection, analysis and presentation of data in agricultural and biological research. Information valid for courses offered 2010 through 2011. Open to graduate students only.

**Communication and Ethics Core Course:**

**BMEG 801: Communication and ethics in Biomedical Engineering (3)**
This course will cover communication methods for professional development such as written and oral presentations. Emphasis will be placed on topics such as preparing proposals, journal papers, and dissertations. Proposal preparation will include topics such as selecting a research topic, reviewing the literature, generating hypotheses, and writing study designs. Issues of authorship, peer review, plagiarism, recordkeeping, patents, technology transfer, conflicts of interest, and copyright will be addressed.

**Elective Courses:**

**BISC 602 Molecular Biology of Animal Cells (3)**
Examination of eucaryotic genes, synthesis and processing of messenger RNA and control of protein synthesis with emphasis on regulation of normal cellular growth and differentiation and the process of cancer cell transformation. Emphasis on recombinant DNA technology, monoclonal antibody production and tissue culture. PREREQ: BISC401 and BISC403

**BISC 605 Advanced Mammalian Physiology (4)**
Systemic mammalian physiology: cellular mechanisms, muscle, cardiovascular, respiratory, renal, digestive and endocrine systems. Emphasizes human physiology and includes discussions of primary literature in the field of physiology research. PREREQ: BISC306 or instructor's approval. Priority given to graduate students and seniors seeking research-related careers.

**BISC 606 Advanced Mammalian Physiology II (4)**
Continuation of BISC605. Systemic mammalian physiology: respiratory, renal, gastrointestinal, and reproductive systems and metabolism. PREREQ: BISC605.

**BISC 612 Advanced Cell Biology (3)**
Four major sections: (1) cell structure/function; (2) signaling mechanisms and cell fate; (3) protein biosynthesis and trafficking and (4) integrative cell biology. Requires interpreting and evaluating data from primary scientific literature. PREREQ: BISC305, BISC401 and either BISC306 or BISC408.

**BISC 625 Cancer Biology (3)**
Provides an integrated lecture series summarizing current knowledge in cancer biology. Topics include: statistics of incidence/survival, pathology, the process of chemical carcinogenesis and sources of carcinogens, genetic and epigenetic mechanisms and consequences, viral and hormonal carcinogenesis as well as current treatment options. PREREQ: BISC207, BISC401, CHEM103, CHEM104, CHEM321. Requires permission of instructor.

**BISC 626 Advanced Neuroanatomy (3)**
Covers the functional organization of the nervous system from a clinical perspective, with emphasis on the brain stem, cranial nerves, limbic system, and cerebral cortex. Also surveys basic etiology, signs and symptoms of injury to spinal pathways, sensory-motor systems, methods of neurologic testing, and the Mental Status Exam.

**BISC 627 Advanced Neurophysiology (3)**

Study of the physiology of the central nervous system, with an emphasis on the cellular and molecular basis of signal transmission in the brain.

**BISC 639 Developmental Neurobiology (4)**
Developmental biology of the nervous system, including cellular components, neural induction, neurogenesis and neuronal migration, cellular determination, axon outgrowth and pathfinding, synapse formation, programmed cell death, neurotrophic factors, neurodevelopmental disorders, and early critical periods. About this section: Requires permission of instructor.

**BISC 660 Environmental Physiology (3)**
Biochemical and morphological adaptive responses of animals to environmental factors; adjustments to changes in salinity, temperature, oxygen, etc. at the level of the whole organism, organ system and cell. PREREQ: BISC306

**BISC 671 Cellular and Molecular Immunology (4)**
Introduces the basic concepts of immunology and describes how different immune responses can either protect the body from infection or lead to immunological based diseases. Focuses on cellular interactions and the resultant molecular responses that lead to immune protection. PREREQ: BISC401 or BISC305 or BISC300. Requires permission of instructor.

**BISC 675 Cardiovascular Physiology (3)**
Basic physiology of the human cardiovascular system, basis of cardiovascular diseases and current treatments. The focus is on heart failure, hypertension, atherosclerosis, thrombosis and leukemia. PREREQ: A physiology course at or above the 300 level and BISC401 or CHEM527 or CHEM641.

**BISC 806 Advances in Cell and Organ Systems (3)**
Literature-based current topics in cell and organ systems. PREREQ: Requires permission of instructor.

**CHEG 600/ MSEG 630 Introduction to Science and Engineering of Polymer Systems (3)**
See listing under MSEG 630.

**CHEG/MSEG 601 Structure and Properties of Polymer Materials (3)**
See listing under MSEG 601

**CHEG 620 Biochemical Engineering (3)**
Application of chemical engineering principles to analyze different molecular engineering approaches, evaluate bioreactors and product recovery processes, analyze cellular engineering approaches and critically evaluate primary bioengineering data from literature and laboratory experiments. PREREQ: MATH243. COREQ: CHEM527, or CHEM641 and CHEM642.

**CHEG 621 Metabolic Engineering (3)**
Focuses on design and control of cellular metabolism and includes analysis of metabolic function using systems engineering and molecular biology tools. Goals are to learn computational approaches for analyzing metabolic behavior, and experimental techniques to measure cellular components, metabolites, proteins and nucleic acids. PREREQ: CHEM527 or CHEM641; MATH305. Open only to graduate students, seniors and juniors.

**CHEG/CHEM 649 Molecular Biophysics (3)**
Biophysical principles and methods: thermodynamic and kinetic analysis of folding; protein-nucleic acid interactions; ligand binding; spectroscopy; structural methods; modeling; calorimetry; ultracentrifugation; SPR. Problem solving in macromolecular interactions: protein refolding; altering

ligand affinity; increasing protein stability; drug design and HTS; protein expression and solubility; protein engineering. PREREQ: Introductory-level courses in chemistry, physics biochemistry.

**CHEG 650 Biomedical Engineering I (3)**
Application of engineering concepts and techniques to problems in biomedicine. Mass transfer and chemical reactions in the body, drug distribution, kidney and other organ physiology, and artificial organs.

**CHEG 801 Process Control and Dynamics (3)**
Advanced concepts on MIMO system modeling, identification, analysis and control appropriate to the chemical and allied industries. Model Predictive Control; robust control and Nonlinear control; statistical methods. Introduction to control systems in physiological processes. PREREQ: Undergraduate control course.

**CHEG/MSEG 823 Transmission Electron Microscopy in Materials Science (3)**
See listing under MSEG 823.

**CHEG 825 Chemical Engineering Thermodynamics (3)**
Applications of classical and molecular thermodynamics to industrial problems in chemical and phase equilibrium. Topics include nonideal solutions, high pressure systems, complex reaction equilibria, generalized correlations and equations of state. PREREQ: CHEG325 and CHEM444

**CHEG 827 Chemical Engineering Problems (2-3)**
The application of numerical methods for the solution of chemical engineering problems. Linear and nonlinear analysis. Numerical methods applied to the solution of ODE's, PDE's and optimization problems with applications to fluid flow, heat and mass transfer reaction engineering. Monte-Carlo and molecular dynamics. PREREQ: Undergraduate linear algebra and differential equations.

**CHEG 828 Statistical Thermodynamics (2-3)**
A discussion of the concepts of classical statistical mechanics, with special emphasis on applications, thermodynamic modeling and physical properties correlations. PREREQ: CHEG825 or equivalent

**CHEG 842 Selected Topics in Biochemical Engineering (1)**
Presentation of state-of-the-art research, techniques, and technology in biotechnology. Major course topics include: drug delivery, proteomics and metabolic engineering, biophysical characterization, and protein-protein interactions. Requires permission of instructor.

**CHEG 845 Advanced Transport Phenomena (4)**
Principles and applications of momentum, mass and energy transfer. Topics include molecular analysis of transport, continuum and macroscopic conservation and constitutive equations, scaling and dimensional analysis, and exact and approximate solutions for problems of practical importance. PREREQ: Undergraduate studies in transport phenomena

**CHEM 641 Biochemistry (3)**
Structure and function of proteins, enzymes and coenzymes; kinetics and mechanisms; carbohydrate metabolism and its regulation; and citric acid cycle. PREREQ: CHEM322 or CHEM332.

**CHEM 642 Biochemistry (3)**
DNA: The vehicle of inheritance. The topology of DNA. Central dogma of molecular biology. The mechanisms of replication,transcription and translation. DNA recombination and repair. Recombinant DNA technology, Chromosomal DNA and its packaging. Gene expression and its control. PREREQ:

CHEM641.

**CHEM 643 Intermediary Metabolism (3)**
General principles of intermediary metabolism with emphasis on biosynthetic pathways of amino acids, nucleotides, coenzymes, antibiotics and toxic secondary metabolites. PREREQ: CHEM641

**CHEM 645 Protein Structure and Function (3)**
Overview of structural biology, including how x-ray crystallography, NMR spectroscopy, homology modeling and other techniques are used to solve or model structures of macromolecules. Representative proteins discussed in terms of how a protein's structure relates to its function. PREREQ: CHEM641

**CHEM 646 DNA-Protein Interactions (3)**
Current topics of DNA-protein interactions which focus on DNA replication, DNA recombination, DNA damage repair, transcription and translation processes. PREREQ: CHEM642

**CHEM 647 Biochemical Evolution (3)**
The origins and evolution of life as reconstructed from geochemical, biochemical and genetic evidence. PREREQ: CHEM642 or CHEM527

**CHEM 648 Membrane Biochemistry (3)**
Recent advances in the structure and function of biomembranes and related model systems, with particular reference to molecular and physiochemical mechanisms. PREREQ: CHEM527 or CHEM641

**CHEM/CHEG 649 Molecular Biophysics (3)**
See listing under CHEG 649.

**CISC 642 Introduction to Computer Vision (3)**
An introduction to the analysis of images and video in order to recognize, reconstruct, model, and otherwise infer static and dynamic properties of objects in the three-dimensional world. Studies the geometry of image formation; basic concepts in image processing such as smoothing, edge and feature detection, color, and texture; segmentation; shape representation including deformable templates; stereo vision; motion estimation and tracking; techniques for 3-D reconstruction; image registration methods. PREREQ: CISC220 equivalent.

**CISC/CGSC 681 Artificial Intelligence (3)**
Programming techniques for problems not amenable to algorithmic solutions. Problem formulation, search strategies, state spaces, applications of logic, knowledge representation, planning and application areas. PREREQ: CISC220 and CISC304 or equivalent.

**CISC/BINF 689 Topics: Artificial Intelligence (3-12)**
Contents vary to coincide with the interests of students and faculty. PREREQ: CISC681.

**CISC/BINF 849 Advanced Topics in Computer Applications (3-12)**
Contents vary to coincide with the interests of students and faculty. PREREQ: Requires permission of instructor.

**CISC 852 Computer Network Performance (3)**
Performance analysis of computer networks and network protocols. Introduction to queuing theory, stochastic processes, Markov chains, and various queuing models. Open and closed queuing

networks. Analysis of ARQ retransmission strategies, multi-access communication, routing, flow control, and congestion control schemes. PREREQ: CISC650 or ELEG651 or equivalent.

**CISC 887 Internet Information Gathering (3)**
Approaches to information gathering, filtering, and integration including work in the heterogeneous database, information retrieval and agent-oriented communities. Text indexing, vector-based and probabilistic retrieval, semantic web technologies, wrappers and mediators, query planning and optimization, collaborative filtering, information agents, applications. PREREQ: CISC681 or equivalent.

**ELEG 630 Information Theory (3)**
Information theory establishes the theoretical limits that can be achieved in communications systems, and provides insights about how to achieve these limits in practical systems. Covers lossless and lossy compression, and studies the maximum information rate achievable in communications over noisy channels. PREREQ: Undergraduate course in probability.

**ELEG 631 Digital Signal Processing (3)**
Theory of discrete-time signals and systems with emphasis on the frequency domain description of digital filtering and discrete spectrum analysis, fast Fourier transform, z-transform, digital filter design, relationship to analog signal processing. PREREQ: ELEG305 or equivalent

**ELEG 636 Statistical Signal Processing (3)**
Introduction to random vectors and random processes and second-order moment and spectral characterizations. Linear transformations of stationary processes. Parameter estimation. Orthogonality principle and optimal linear filtering. Levison recursion and lattice prediction filters. AR and ARMA models and their Yule-Walker characterizations. Classical and modern spectrum estimation. PREREQ: Undergraduate courses in probability and signals and linear systems

**ELEG 671 Mathematical Physiology (3)**
Mathematical methods in Human Physiology, covering cellular, tissue, organ, and integrated systems. Dynamic modeling of homeostasis, endocrine regulatory systems, immune response dynamics, mutation and selection. Mathematical methods covered include linear and nonlinear differential equations, Lyapunov analysis, mass action, Hamming spaces, reaction-diffusion equations, and simulation. Seniors, graduate students only.

**ELEG 675 Image Processing with Biomedical Applications (3)**
Fundamentals of digital image processing, including image formation, acquisition, transforms, enhancement, restoration, coding, and reconstruction from projections. Attention given to biomedical imaging modalities, including X-ray, computed tomography (CT), magnetic resonance (MR) imaging, and ultrasound. PREREQ: ELEG305 or equivalent

**ELEG 679 Introduction to Medical Imaging Systems (3)**
Physics, instrumentation, system design, and image reconstruction algorithms will be covered for the following modalities: radiography, x-ray computed tomography (CT), single photon emission computed tomography (SPECT), positron emission tomography (PET), magnetic resonance imaging (MRI), and real-time ultrasound. PREREQ: Requires permission of instructor.

**ELEG 680 Immunology for Engineers (3)**
Human adaptive immune response to viruses, both cellular and humoral. Generation of the immune response cells and response to types of immunogen as well as basic nonlinear differential model analysis, basic mathematical models of their interactions and implications of these models for the

treatment of disease. Access significant amount of current literature. No prior knowledge of biology required.

**ELEG 694/MEEG 624 Control of Dynamic Systems (3)**
See listing under MEEG 624.

**ELEG 801 Advanced Topics in Biomedical Engineering (3)**
Advanced topics in biomedical engineering. Applications of engineering techniques in biology and medicine drawn from current research literature. Assignments will include presentation of journal articles and programming assignments which illustrate ideas from the literature. PREREQ: ELEG671 or permission of instructor.

**MATH 529 Fundamentals of Optimization (3)**
Maximization and minimization of functions of finitely many variables subject to constraints. Basic problem types and examples of applications; linear, convex, smooth, and non-smooth programming. Optimality conditions. Saddle points and dual problems. Penalties and decomposition. Overview of computational approaches. PREREQ: Linear algebra (MATH349 or equivalent) and vector calculus (MATH243 or equivalent).

**MATH 611 Introduction to Numerical Discretization (3)**
Piecewise polynomial and global interpolation, adaptive, Gaussian, and multidimensional quadrature, Runge-Kutta and multistep methods for initial value problems, finite differences for boundary value problems, method of lines for partial differential equations.

**MATH 617 Introduction to Applied Mathematics II (3)**
Continuation of MATH616. PREREQ: MATH616 or permission of instructor.

**MATH 630 Probability Theory and Applications (3)**
Introduction to probability theory as background for further work in statistics or stochastic processes. Sample spaces and axioms of probability; discrete sample spaces having equally likely events; conditional probability and independence; random variables and describing their distributions; classical discrete and continuous random variables; mathematical expectation and moments of a distribution; the distribution of a function of a random variable; Chebyshev's inequality; the law of large numbers; central limit theorem.

**MATH 660 Introduction to Systems Biology (3)**
Systems biology approach, mathematical modeling of biological systems; examples from biomedical and agricultural research areas, biotechnology, industrial processes, and others. Differential equations, stochastic, feedback and control, or network models are discussed. Hands-on work via PBL modules. PREREQ: Equivalent of CHEM527, MATH535 and one of BISC302, 305, 306, 401 or 403.

**MEEG 612 Biomechanics of Human Movement (3)**
Mechanics of the musculoskeletal system with an emphasis on the control of human movement. Topics include how the nervous system activates muscles, the mechanical properties of skeletal muscle and mechanisms for controlling limb movement. Applications include gait analysis, sports biomechanics and hand trajectory formation. Involves computer modeling of musculoskeletal systems. PREREQ: PHYS201 or PHYS207 or graduate status.

**MEEG 624/ELEG 694 Control of Dynamic Systems (3)**
Review of modeling and analysis of dynamic systems. Transient and steady-state responses. Introduction to the theory of feedback controls and stability for continuous time systems. Control

system design studies via root-locus, frequency domain and state space methods. Brief introduction to digital controls.

**MEEG 682 Clinical Biomechanics (3)**
The biomechanics and patho-mechanics of various human musculoskeletal joint systems. Normal joint anatomy and biomechanics; the mechanical effects of pathology and the goals of surgical repairs to counteract them are explored through in vitro, in vivo and mathematical modeling studies of joint system mechanics.

**MEEG 683 Orthopedic Biomechanics (3)**
Anatomy and physiology including microanatomy and mechanics of bone, cartilage, tendon and muscle. Mechanical modeling of body including joint loads, motion analysis, muscle forces and interaction with orthopedic devices.

**MEEG 684 Biomaterials and Tissue Engineering (3)**
Biomaterials for mechanical replacement of Orthopaedic tissues: bone, cartilage, ligament, tendon and whole joint systems. Topics include normal tissue mechanics and biocompatibility, mechanical behavior, degradation and host response to biomaterials. Experimental methods to assess biomaterials along with design and manufacturing considerations for joint and tissue replacements.

**MEEG 685 Control of Human Movement (3)**
Examines current topics in biomechanics research relevant to control of human movement including anatomy of the neuro-musculo-skeletal system, experimental techniques for study of CNS organization, and coordination principles of simple and complex tasks. PREREQ: PHYS201 or PHYS207 or graduate status.

**MEEG 686 Cell and Tissue Transport (3)**
Analysis of water, solute, gas, and heat exchange in microcirculation and relationship between structure and function. Transport in biological porous media examined and applied to arterial wall, bone, and cartilage. Active transport across membranes considered and applied to kidney and secretary organs. Introduction to transport across cell membrane and role of receptors in transport, cell adhesion, and intracellular signaling presented.

**MEEG 862 Advanced Engineering Analysis (3)**
Emphasis on asymptotic and perturbation methods. Topics from among the following: steepest descent and stationary phase; phase plane; asymptotic analysis of ODEs and PDEs using such methods as WKB, matched asymptotic expansions, Pade approximants, straining, and multiple scales; similarity methods; catastrophe

**MSEG/CHEG 601 Structure and Properties of Polymer Materials (3)**
Measurement and control of the microstructure and properties of solid polymers. Structure generation, structure-property models and effects of processing on properties. PREREQ: MSEG302

**MSEG 625 Entrepreneurship and Risk: Meeting the Challenges (3)**
Deals with critical financial, legal, scientific and engineering issues confronted during initial planning stages of high technology start-up enterprise. Range of speakers from finance, marketing, engineering, law and early- and late-stage start-up companies provide perspective on challenges of launching new business venture. Work in cross-disciplinary teams to develop R&D strategic and business plan for new high tech product offering.

**MSEG 630/CHEG 600 Introduction to Science and Engineering of Polymer Systems (3)**

Provides an understanding of the science and engineering of macromolecules from a structure/property perspective. Topics include polymerization, chain structure and configuration, polymer size and shape, phase separation behavior, amorphous and crystalline state, glass-rubber transition, cross linking/rubber elasticity, viscoelasticity, rheology polymer processing and mechanical behavior.

**MSEG 633/833 Polymer Synthesis and Characterization Lab (3)**
Provides direct laboratory experience with the synthesis of a variety of conventional polymers via step growth, radical, and ionic polymerization methods. Polymers synthesized are also characterized via common polymer characterization methods such as IR spectroscopy, gel permeation chromatography, differential scanning calorimetry, and NMR spectroscopy. PREREQ: MSEG832 COREQ: MSEG832

**MSEG 635/835 Principles of Polymer Physics (3)**
Chain statistics, thermodynamics, and kinetics are discussed in the context of modern polymer physics characterization techniques, such as dynamic and static light scattering and elastic/inelastic neutron scattering.

**MSEG 660 Biomaterials and Tissue Engineering (3)**
This course covers the principles and methodologies of tissue engineering with polymeric biomaterials. Both biological and materials science concepts will be introduced. Specific topics include cell growth and differentiation, extracellular matrix composition and properties, polymerization methods, polymer characterization methods and mechanical properties, and drug delivery. About this section: Students are expected to have a basic knowledge of organic chemistry and biology prior to enrollment in this course.

**MSEG 803 Equilibria in Material Systems (3)**
Classical thermodynamics of condensed systems (macroscopic description). Fundamental laws. Functions and equations of state. Equilibrium and stability criteria. Single component phase equilibrium, multi-component mixtures. Partial molar properties, non-ideal mixtures. Equilibrium in multi-phase, multi-component systems. Phase Rule. PREREQ: MSEG302 or Graduate Standing.

**MSEG 804 Kinetics in Material Systems (3)**
Theory of reaction kinetics. Transport mechanisms in solids. Nucleation and spinodal decomposition. Interfacial attachment and migration. Transition state theory applied to diffusion and phase transformation. Elementary non-equilibrium thermodynamics and phenomenological equations in material transport and phase transformation. PREREQ: MSEG302 or Graduate Standing

**MSEG 817 Composite Materials (3)**
Introduction, thermoelastic behavior of laminated composites, statistical strength theories of continuous-fiber composites, short-fiber composites, hybrid composites, two-dimensional textile structural composites, three-dimensional textile structural composites, flexible composites, and nonlinear elastic finite deformation of flexible composites. PREREQ: MEEG610 or MEEG616 or MEEG617

**MSEG/CHEG 823 Transmission Electron Microscopy in Materials Science (3)**
Transmission electron microscope, lens defects and resolution. Diffraction and Kikuchi pattern formation and analysis. Image formation: kinematical and dynamical theories of electron diffraction. Burger's vector and other fault analysis. Convergent beam and microdiffraction techniques. High resolution electron microscopy.

**MSEG 832 Principles of Polymerization (3)**

Provides background in the theoretical and synthetic considerations of polymer synthesis. Topics include theoretical descriptions of molecular weight distributions, step growth polymerizations, chain growth polymerizations, living polymerizations, as well as chemical strategies for the production of various polymers. Specialized topics in the current polymer chemistry literature may also be discussed.

**STAT 609 Regression and Experimental Design (3)**
Introduction and overview of inferential methods used in analyzing regression models and linear models for experimental designs. PREREQ:  STAT608 or equivalent