The University Curriculum Committee recommends approval of the following:

1. New Courses

BMEN 241. Foundations of Biomechanics. (3-0). Credit 3. Foundations of mechanics in addressing biomedical problems, including introductions to mechanobiology and mechanically and thermally based clinical treatments emphasizing the development of associated mathematical preliminaries and basic concepts of thermomechanics, including (1) vectors, tensors, and matrices, (2) kinematics including displacement, rotation, acceleration, deformation gradients and velocity gradients, (3) concepts of stress and heat-flux, (4) equations of motion, and (5) constitutive relations. Prerequisite: ENGR 211 or registration therein.

HIST 320. History of the Atlantic World. (3-0). Credit 3. Introduction to the comparative study of the civilizations and cultures that bordered on the Atlantic Ocean; examination of culture and economic exchanges and adaptations, migrations, empire-building, and the emergence of new societies and cultures. Prerequisite: Junior or senior classification.

LING 481. Senior Seminar. (3-0). Credit 3. Seminar on significant figures, movements and issues in linguistics or rhetoric, with special attention to the methods and materials of scholarship. Prerequisites: Junior or senior classification; 6 credits in linguistics.

MATH 427. Introduction to Number Theory. (3-0). Credit 3. Prime and composite integers; Euclidean algorithm; modular arithmetic; Chinese remainder theorem; unique factorization; quadratic reciprocity; Riemann zeta function; representation of numbers as a sum of squares. Prerequisites: MATH 220 and 222; junior or senior classification or approval of instructor.


POL 303. Introduction to Political Theory. (3-0). Credit 3. Introduction to the study of political theory, with attention to major themes in the history of political thought; discussion of the nature of politics; examination of method in political theory and its relation to the discipline of political science. Prerequisite: Junior or senior classification.
2. Changes in Courses

**MEEN 368. Solid Mechanics in Mechanical Design.**

Course description
From: Stress analysis of machine elements; advanced mechanics of materials; failure mechanisms, inertial effects; fatigue and fracture; nonlinear and inelastic material response; application to mechanical engineering design.
To: Stress analysis of deformable bodies and mechanical elements; stress transformation; combined loading; failure modes; material failure theories; fracture and fatigue; deflections and instabilities; thick cylinders; curved beams; design of structural/mechanical members; design process.

Prerequisites
From: MEEN 357 and 360; CVEN 305.
To: CVEN 305; MEEN 357 and 360 or registration therein; junior or senior classification

**MEEN 414. Principles of Turbomachinery.**

Course description
From: Analysis of gas turbine cycles, high-speed gas flow, turbine and compressor kinematics and thermodynamics; steam turbines and special cycles.
To: Aero-thermodynamic and mechanical design of turbomachinery components including steam and gas turbine stages, compressor stages, and inlet and exhaust systems, and their integration into power and thrust generation units; design and off-design behaviors of turbine and compressor stages and units; design with SolidWorks.

Prerequisite
From: MEEN 344 or equivalent.
To: MEEN 421 or approval of instructor; junior or senior classification

**MEEN 437. Principles of Building Energy Analysis.**

Course description
From: Application of thermodynamics and heat transfer to the calculation of design space heating and cooling load; computer techniques for estimating annual energy consumption; design methods for reducing energy consumption.
To: Analysis of building energy use by applying thermodynamics and heat transfer to building heating and cooling load calculations; heat balance and radiant time series calculation methods; psychrometric analysis, indoor air quality, effect of solar radiation on heating and cooling of buildings. Required design project.

Prerequisite
From: MEEN 461 or equivalent.
To: ENGR 212 or equivalent.
MEEN 461. Heat Transfer.

Course description
From: Conduction, convection and radiation and in combination. Steady and unsteady states, mathematical treatments, graphical and numerical solutions, dimensional analysis.
To: Heat transfer by conduction, convection and radiation: steady and transient conduction, forced and natural convection, and blackbody and gray body radiation; multi-mode heat transfer; boiling and condensation; heat exchangers.

MEEN 464. Heat Transfer Laboratory.

Course description
From: Measurement in basic heat transfer design and heat exchangers; experimental verification on the theoretical and semi-empirical results developed in MEEN 461.
To: Basic measurement techniques in conduction, convection, and radiation heat transfer; experimental verification of theoretical and semi-empirical results; uncertainty analysis.

MEEN 472. Gas Dynamics.

Course Description
From: Analysis of general equations of fluid flow: properties of steady and unsteady flows of compressible fluids in one dimension; isentropic flow, shock, heat addition and friction as applied to ducts, nozzles, diffusers or around lifting surfaces or objects.
To: Fundamental analysis of compressible flow and its application to supersonic airfoils/projectiles, jet and rocket nozzles, normal and oblique shock waves, expansion waves, shock tubes, supersonic wind tunnels, and compressible pipe flows.

POLS 320. Race, Ethnicity and Politics in the United States.

Course title
From: Race, Ethnicity and Politics in the United States.
To: Race and Politics in the United States.

Course description
From: The politics of race and ethnicity in the United States; contrast of the political experiences of race and ethnic groups with the ideals and realities of democratic political systems.
To: The politics of race in the United States: contrast of the political experiences of racial groups with the ideas and reactions of democratic political system.

Prerequisite
From: POLS 206 or approval of instructor.
To: POLS 206 and 207 and junior or senior classification.