- TO: Engineering Faculty
- FROM: The Faculty of Agricultural and Biological Engineering
- RE: Changes in Undergraduate Level Course ABE 201 pre and co-requisites

The faculty of the Department of Agricultural and Biological Engineering has approved the following change in prerequisites and corequisites to an undergraduate level course. This action is now submitted to the Engineering Faculty with a recommendation for approval.

## From: ABE 201 – Thermodynamics in Biological Systems I

Sem. 1. Class 1, cr. 3. Prerequisite: BIOL 295F, CHM 116; Corequisite: BIOL 295E. Authorized equivalent courses or consent of instructor may be used in satisfying course pre- and co-requisites.

Thermodynamic principles associated with biological systems and processing of biological materials. Emphasis on the first law of thermodynamics. Fundamentals of steady-state mass and energy balances for reacting and non-reacting processes including multiple unit operations emphasizing living systems and bioprocessing. Applications of the first law conservation of energy to biological systems, energy conversion systems, and the environmental impacts of energy production. Development of engineering problem solving skills via MathCad and MatLab software.

## To: ABE 201 – Thermodynamics in Biological Systems I,

Sem. 1. Class 1, cr. 3.

Prerequisite: CHM 116 or CHM 124; Authorized equivalent courses or consent of instructor may be used in satisfying course pre-requisites.

Thermodynamic principles associated with biological systems and processing of biological materials. Emphasis on the first law of thermodynamics. Fundamentals of steady-state mass and energy balances for reacting and non-reacting processes including multiple unit operations emphasizing living systems and bioprocessing. Applications of the first law of conservation of energy to biological systems, energy conversion systems, and the environmental impacts of energy production. Development of engineering problem solving skills via MathCad and MatLab software.

**Reason:** CHM 124 was added as a prerequisite as some students take this class instead of CHM 116. BIOL 295F and BIOL 295E were removed as pre- and co-requisites to allow students to take these classes in a later semester. The biology and biochemistry needed for the course topics have been incorporated into ABE 201.

Serne Enge

Bernard A. Engel Professor and Head Agricultural and Biological Engineering Department