TO: The Faculty of the College of Engineering

FROM: School of Electrical and Computer Engineering of the College of Engineering

RE: New Graduate Course, ECE 61020 Operation of Modern Power Systems

The faculty of the School of Electrical and Computer Engineering has approved the following new course. This action is now submitted to the Engineering Faculty with a recommendation for approval.

ECE 61020 Operation of Modern Power Systems
Sem. 2, Lecture 3, Cr. 3.
Prerequisite: ECE 43200 (or equivalent)
Co-Requisite: ECE 58000 (or equivalent)

Description: Introduction to modern power system operations. Economic dispatch of assets as a constrained optimization problem, and solution methods. The unit commitment problem formulation, and solution methods. Power flow solution methods. Security-constrained economic dispatch and unit commitment. The optimal power flow. Automatic generation control. Operation of power markets.

Reason: In the Power & Energy Systems in ECE area, there are no other courses that cover these topics. There is small (~25%) overlap with IE 590: Power Systems and Smart Grid, which emphasizes electricity markets.

Michael R Melloch

Michael R. Melloch, Associate Head
School of Electrical and Computer Engineering