

(0401739) Power Systems Modeling and Simulation (3 credit Hours)

Modeling methodology including system conceptualization. Model construction and validation (computational accuracy). Model evaluation and calibration. Simulation of energy systems. Optimization techniques; Classical direct search-for-optimum methods, Golden Mean, Conjugate Gradients, Modified Newton Method. Methods for constrained optimization such as Lagrange Multipliers, Search methods, Linear and Dynamic Programming. Use of software packages.