(0401742) Modern Control Theory (3 credit hours)

Review of linear algebra and matrix theory, overview of advanced control engineering components: problem formulation, control algorithms, analysis, system modeling and simulation, multivariable control system, state variable analysis of continuous-time and discrete-time systems, problem formulation, controllability and observability of linear systems, stability of linear and non-linear systems, design of feedback control systems, introduction to optimal, adaptive and neural networks control theories.