Aerospace Engineering

Course Title: **Stochastic Control** **Number of Credits: 3**

Course Topics:

- Brief Review of Linear Systems Theory
- Brief Review of Probability
- Brief Review of Random Variables
- Brief Review of Random Processes
- Least Square Estimation
- Standard Kalman Filter
- Kalman Filter Generalization
- Linear Quadratic Gaussian Control

Reading Resources:

- Speyer, Jason L., and Walter H. Chung. "Stochastic processes, estimation, and control". Society for Industrial and Applied Mathematics, 2008.
- Karl J. Aström (Eds.), "Introduction to Stochastic Control Theory", Academic Press, 1970.
- Simon, Dan. "Optimal state estimation: Kalman, H infinity, and nonlinear approaches". John Wiley & Sons, 2006.