## MIT HST S56 [January 2020] Special Subject: Introduction to Closed-Loop Control of Physiological Systems

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The primary goals of this course are to highlight the basic techniques employed in control theory and system analysis, and to give students an appreciation of how these principles can be applied to manipulate physiological systems to achieve a desired response. Topics covered include: analysis of physiological models, PID control and tuning, optimal control using LQR, Kalman filter, LQG control, PCLC in practice.

Time: January 6, 7, 9, 13, 14, 16; 10am-1pm Location: MIT 56-154 Website: https://hst.mit.edu/academics/course/hst-s56 Prerequisites: Basic Linear Algebra and Differential Equations or Permission of Instructor Contact: HSTs56-info@mit.edu Restrictions: None MIT Units: 1-1-1 (P/D/F) Enrollment limited, priority to for-credit students

## Sign-up: https://bit.ly/2gFIRmu

