

MAE 171b / Spring 2017

Motor Kit Lab Schedule

Week 3: System setup and PID tuning for inverted pendulum mode

Week 4: Modeling of the plants - inertia mode (Type 1) and pendulum mode (Type 0)

Week 5: Continuous-time indirect design and sampling effects for inertia mode

Week 6: Discrete-time direct design – PD controller – for inertia mode

Week 7: Feedforward and notch filter design for pendulum mode

Week 8: State observer design for inverted pendulum mode

Week 9: State observer feedback for inverted pendulum mode

Week 10: Student demonstration

**Week 11: Final exam**