THE UNIVERSITY OF TEXAS AT SAN ANTONIO
EE 5243
INTRODUCTION TO CYBER-PHYSICAL SYSTEMS

FINAL EXAM COVERAGE
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The final exam will include the following topics:

1. Linear time-invariant systems properties and characteristics.

2. Stability of LTI, CT and DT systems.

3. Computation of solution of LTI CT systems.

4. Dynamic programming and principle of optimality.

5. Linear quadratic regulator problem.

6. Optimal control via the HJB-equation.

7. Computation of performance indices.

8. Design of observers for LTI systems with unknown inputs.

9. Writing a simple CVX script.

10. Solution of convex optimization problems.

11. KKT optimality conditions.

12. ...And possibly other topics.