COURSE CALENDAR DESCRIPTION

This course provides an introduction to classical control theory. From a base of dynamic system modeling the course will develop methods for modifying system behavior through feedback so as to produce desired performance and meet specifications in spite of disturbances and modeling errors. Students are expected to be versed in Linear Algebra, Ordinary Differential Equations, and Complex Variables. Signals and Systems would also be a definite asset. Prerequisites: SC/MATH 2015 3.00;

INSTRUCTOR(S)

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<tr>
<th>Name</th>
<th>Section / Format / Term</th>
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<tr>
<td>Shan, Jinjun</td>
<td>Sec. A / LECT / F</td>
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ADDITIONAL INFORMATION

COURSE GRADING POLICY

Homework 10%
Laboratory 25%
Midterm 20%
Final Exam 45%
Total: 100%

COURSE LEARNING OUTCOMES (CLOS)

CLO 1 - Model simple dynamical systems and express in time and frequency domain.
CLO 2 - Understand the structure and response of linear systems.
CLO 3 - Understand system performance specifications.
CLO 4 - Perform system analysis in time and frequency domain for single input single output systems.
CLO 5 - Design of compensators (feedback controllers) for closed loop stability and desired performance.

COURSE OUTLINE

- Overview and Introduction
- Review of Laplace Transforms
- Dynamic Models
- Dynamic Response
- Feedback Properties
- The Root-Locus Design Method
- The Frequency-Response Design Method
REQUIRED TEXTBOOK/MATERIALS
- *Lectures Notes* (will be available online before the class)

ACADEMIC INTEGRITY LINKS
- Senate Policy on Academic Honesty - http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/
- Academic Integrity - http://lassonde.yorku.ca/academic-integrity

STUDENT LINKS
- Student Rights and Responsibilities - http://oscr.students.uit.yorku.ca/student-conduct
- Religious Observance - https://w2prod.sis.yorku.ca/Apps/WebObjects/cdm.woa/wa/regobs
- Student Accessibility Services (SAS) - https://accessibility.students.yorku.ca/
- York University’s Policies on Gender/LGBTQ*/Positive Space - http://rights.info.yorku.ca/lgbtq/

LAND ACKNOWLEDGEMENT
- We acknowledge our presence on the traditional territory of many Indigenous Nations. The area known as Tkaronto has been care taken by the Anishinabek Nation, the Haudenosaunee Confederacy, the Huron-Wendat, and the Métis. It is now home to many Indigenous Peoples. We acknowledge the current treaty holders, the Mississaugas of the New Credit First Nation. This territory is subject of the Dish With One Spoon Wampum Belt Covenant, an agreement to peaceably share and care for the Great Lakes region.
- The Indigenous Framework for York University: A Guide to Action can be found here: http://indigenous.info.yorku.ca/
- Meaning of a land acknowledgement: http://healthydebate.ca/opinions/indigenous-land-acknowledgements

Many courses utilize Moodle, York University’s course website system. If your course is using Moodle, click here to access it.
Moodle @ York University