AUTOMATIC CONTROL ENGINEERING

ENGINEERING 6951

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Teaching Assistant: Plinio Pinto (Project)
Teaching Assistant: Patrick Glavine (Labs)
Teaching Assistant: Jonathan Bennett (Labs)
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Student Conduct

"Like Professional Engineers, engineering students are expected to behave in a professional manner at all times. Students are encouraged to conduct themselves in a manner consistent with the PEG-NL code of ethics. MUN has two sets of rules which deal with inappropriate behaviour by students. The first set deals with academic offences such as cheating while the other set deals with non-academic offences such as disruptive behaviour in class. Both sets of rules can be found in the University Calendar under Regulations. It is strongly recommended that students read and follow these rules because the penalties for breaking them can be severe, the severest being expulsion from the University."

Evaluation

Homework and labs are worth 10%. Boat Project is worth 15%. Quiz #1 (Tuesday 18 October) is worth 10%. Quiz #2 (Tuesday 15 November) is worth 15%. The final exam is worth 50%. A formula sheet will be provided at each quiz and the final exam. Each quiz will be held in the 9am to 10:15am lecture time slot.

Approximate Due Dates for Labs
26 September; 17 October; 31 October; 14 November

Approximate Due Dates for Homework
3 October; 24 October; 7 November

Content Summary
Automatic Control Engineering examines the performance of feedback control systems. Topics include: feedback control concept; control system performance; control system stability; control system design.

Resources
Controls Text by Franklin and Powell
Controls Notes by Hinchey

Laboratory Facilities
PID Gains Lab; Switching Lab; DAQ Lab; Nyquist Lab

Lab Safety
Students must wear safety boots in the fluids and thermal labs.
Students must wear a life vest when working near water tanks.

Boat Project
You must design, construct and test a small boat that can dynamically position itself in the wave tank. The goal of the project is to give you some experience putting a control system together. The project is worth 15% overall. A project progress report worth 3% is due Friday 7 October. Demos worth 2% will take place the week starting 3 October. A project final report worth 6% is due 14 November. Demos worth 4% will take place the week starting 7 November. The project will make use of a breadboard controller constructed in the lab.