



Calvin College

Engineering Department

Engineering 315 - Control Systems

Fall 2004

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**Textbooks:** Modern Control Systems, 9th ed., Dorf and Bishop  
<http://cwx.prenhall.com/bookbind/pubbooks/dorf/>

**Lectures:** 12:30 – 1:20PM M W F SB 136

**Lab A:** ???? SB136

**Lab B:** ???? SB136

# Introduction

Teaching / Learning Process: An Integrated-Participative Approach

(No Spoon-Feeding)

General Goals (Design of Control Systems and Development of Christian Character)

Curriculum/Syllabus

Instruction (Variety of Methods)

Web-Based Environment

Tutoring Method

No Student versus Instructor

Responsibility and Interaction

*“The only people who achieve much are those who want knowledge so badly that they seek it while the conditions are still unfavorable. Favorable conditions never come.”*

CS Lewis

**Students are, then, strongly encouraged (in the context of studying engineering fundamentals and applied disciplines) to:**

- 1- Become immersed (mind and heart) and take ownership of the learning process;
- 2- Strive for excellence in learning the fundamentals and applications of engineering design related disciplines;
- 3- Consider engineering in a broader context, and to appreciate the multi-faceted nature, coherency and unity of creation;
- 4- Understand the real world reality (in terms of businesses, economics and politics) in which projects are developed;
- 5- Make the connection between faith and engineering practice and find ways in which engineering can be used as a redemptive tool;
- 6- Translate into their designs normative, sustainable characteristics and integrity, or in other words, the permanent moral values;
- 7- Realize that Christian engineering, though sometimes apparently indistinguished from the “humanist” technology, needs to lead the way in considering the unity, coherency and diversity of creation;
- 8- Articulate and communicate their understanding through presentations and paper writing for professional and educational conferences;
- 9- Grow and gain maturity in their emotions, sentiments and spirituality;
- 10 - Demonstrate their passion and compassion as they seek to learn and serve God in the engineering arena;

All of these need to be achieved in a balanced way - that is, Christian engineers are to cultivate their relationship with God and seek to serve Him in all areas of life.