ELEC482 – Electrical Drive Systems

Term – Spring 2017 (201701)

Instructor
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Office Hours
Time: By Appointment
Location: via Skype

Course Objectives
This course provides an overview of the principles of motor control and the application of power electronic converters in dc and ac motor drives.

Learning Outcomes
By the end of the course, the students can explain the principles of motor control, identify the elements of drive systems, analyze dc and ac motor drives, and select an appropriate drive for a particular application.

Syllabus

A-Section(s): A01 / CRN 21188, A02 / CRN 21189
Days: Saturdays
Time: 3:15-6:00 PM
Location: ECS 104

Optional Text
Title: Power Electronics and Motor Control, 2nd Ed.
Author: W. Shepherd, L. N. Hulley, and D. T. W. Liang
Publisher: Cambridge University Press
Year: 1995

References:
Title: Electric Motor Drives: Modeling, Analysis, and Control
Author: R. Krishnan
Publisher: Prentice Hall
Year: 2001

Title: Analysis of Electric Machinery and Drive Systems, 3rd Ed.
Author: P. C. Krause, O. Wasynczuk, S. D. Sudhoff, and S. Pekarek
Publisher: Wiley-IEEE Press
Year: 2013
Assessment:
Assignments: 20%  
Due Dates: Jan 21, Feb 4, Mar 11, and Mar 25
Mid-term 40%  
Date: Feb. 25, 2016
Final Exam 40%

The final grade obtained from the above marking scheme for the purpose of GPA calculation will be based on the percentage-to-grade point conversion table as listed in the current Undergraduate Calendar.

Assignment of E grade and supplemental examination for this course will be at the discretion of the Course Instructor. The rules for supplemental examinations can be found in the current Undergraduate Calendar.
http://web.uvic.ca/calendar2017-01/undergrad/info/regulations/grading.html

Note to students: Students who have issues with the conduct of the course should discuss them with the instructor first. If these discussions do not resolve the issue, then students should feel free to contact the Chair of the Department by email or the Chair's Secretary to set up an appointment.

Accommodation of Religious Observance: http://web.uvic.ca/calendar2017-01/general/policies.html

Policy on Inclusivity and Diversity: http://web.uvic.ca/calendar2017-01/general/policies.html

Standards of Professional Behaviour: You are advised to read the Faculty of Engineering document Standards for Professional Behaviour, which contains important information regarding conduct in courses, labs, and in the general use of facilities.
https://www.uvic.ca/engineering/assets/docs/professional-behaviour.pdf

Cheating, plagiarism and other forms of academic fraud are taken very seriously by both the University and the Department. You should consult the entry in the current Undergraduate Calendar for the UVic policy on academic integrity.
http://web.uvic.ca/calendar2017-01/undergrad/info/regulations/academic-integrity.html

Equality: This course aims to provide equal opportunities and access for all students to enjoy the benefits and privileges of the class and its curriculum and to meet the syllabus requirements. Reasonable and appropriate accommodation will be made available to students with documented disabilities (physical, mental, learning) in order to give them the opportunity to successfully meet the essential requirements of the course. The accommodation will not alter academic standards or learning outcomes, although the student may be allowed to demonstrate knowledge and skills in a different way. It is not necessary for you to reveal your disability and/or confidential medical information to the course instructor. If you believe that you may require accommodation, the course instructor can provide you with information about confidential resources on campus that can assist you in arranging for appropriate accommodation. Alternatively, you may want to contact the Resource Centre for Students with a Disability located in the Campus Services Building.
The University of Victoria is committed to promoting, providing, and protecting a positive, and supportive and safe learning and working environment for all its members.
Course Lecture Notes: Unless otherwise noted, all course materials supplied to students in this course have been prepared by the instructor and are intended for use in this course only. These materials are NOT to be re-circulated digitally, whether by email or by uploading or copying to websites, or to others not enrolled in this course. Violation of this policy may in some cases constitute a breach of academic integrity as defined in the UVic Calendar.