

EECE 380

<http://www.ece.ubc.ca/~leos/e380>

<http://www.ece.ubc.ca/~leos>

Dr. Leo Stocco, PhD, PEng.

ece Electrical and Computer Engineering 

[home](#) [tools](#) [EECE360](#) [EECE331](#) [EECE253](#) [EECE251](#) [EECE280](#) [EECE380](#)

[Back to Top](#)
[Fall Schedule](#)
[Spring Schedule](#)
[Media](#)
[Links](#)
[Publications](#)

The University of British Columbia
Department of Electrical & Computer Engineering
5500 - 2332 Main Mall
Vancouver, B.C., Canada
V6T 1Z4

Office [KAIS 3026](#)
Email leos@ece.ubc.ca
Telephone (604) 822-0166



Schedule Spring 2015

Back to Top

Fall Schedule

Spring Schedule

Media

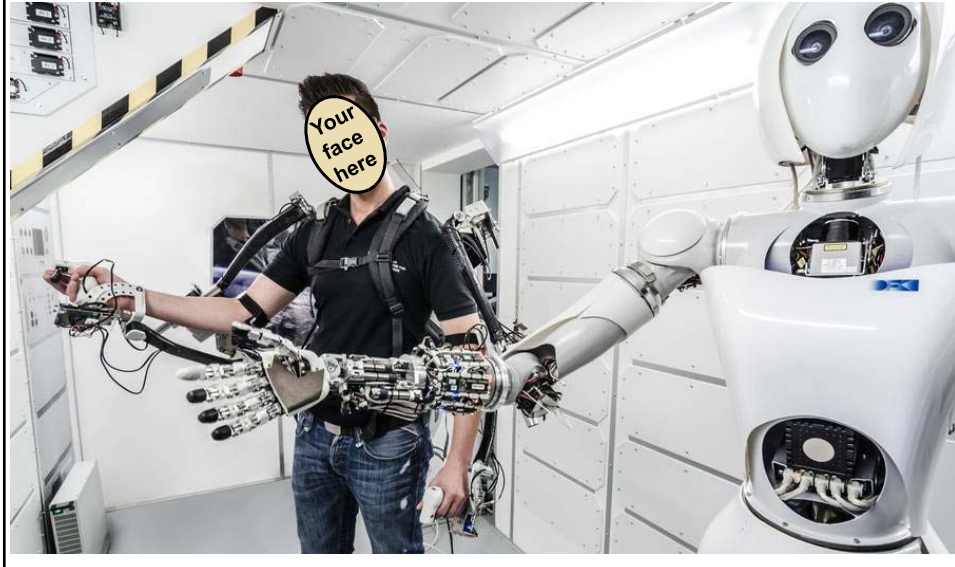
Links

Publications

For an appointment outside of regular office hours, please send me an email					
	Lecture	Lab/Tutorial	Office Hours		
	Monday	Tuesday	Wednesday	Thursday	Friday
8:00 - 9:00	EECE 380	EECE 380	EECE 380	EECE 380	EECE 380
9:00 - 10:00	FSC 1221	Lab 2A	Lab 2B	Lab 2A	Lab 2B
10:00 - 11:00	Office				
11:00 - 12:00	Hours	EECE 331		EECE 331	
12:00 - 1:00		MCLD 402		MCLD 402	
1:00 - 2:00		EECE 380		EECE 380	
2:00 - 3:00		Lab 2E		Lab 2E	
3:00 - 4:00					EECE 331 Lab
4:00 - 5:00		EECE 380		EECE 380	
5:00 - 6:00		Lab 2C	EECE 380	Lab 2C	EECE 380
6:00 - 7:00			Lab 2D		Lab 2D
7:00 - 8:00					

Week	Day	Handouts	Topic
#1	Lecture	Jan 5	Intro to EECE 380 / Design Project / RCG
	Lab		Team selection / Safety Training
#2	Lecture	Jan 12	Actuators / Sensors / Drivers / Control
	Lab		Supervised Lab
#3	Lecture	Jan 19	Altium I (Circuit Design & Simulation)
	Lab		Supervised Lab
#4	Lecture	Jan 26	SolidWorks I (Parts & Sheet Metal)
	Lab		Supervised Lab
#5	Lecture	Feb 2	3D Printing + Mechanical Prototyping + Gearing
	Lab		Supervised Lab
#6	Lecture	Feb 9	Family Day - University Closed
	Lab		Supervised Lab
Midterm Break			
#7	Lecture	Feb 23	Short Presentation : Individual Project
	Lab	sched	Individual Project Evaluation
#8	Lecture	Mar 2	Robotics + Strain Gauges + Team Dynamics
	Lab		Supervised Lab
#9	Lecture	Mar 9	Altium II (PCB Layout)
	Lab		Supervised Lab
#10	Lecture	Mar 16	SolidWorks II (Assemblies)
	Lab		Supervised Lab
#11	Lecture	Mar 23	Guest Lecture - PCB Production
	Lab		Supervised Lab
#12	Lecture	Mar 30	Formal Presentation : Group Project
	Lab		Supervised Lab
#13	Lecture	Apr 6	Easter Monday - University Closed
	Lab	sched	Team Project Evaluation

Project : Tele-Operated Robot



Project

- #1: Servo-Motor
 - Motor
 - Hand-wound
 - I-Driver
 - Soldered proto-board
 - Sensor
 - Optical encoder
 - PID Controller
 - 8051 Micro-controller
 - Altera Board
- #2: Robot
 - Robot
 - Passive Master
 - Active Slave
 - Electronics
 - PCB
 - Enclosure
 - Servos
 - 1 Commercial
 - 1 Scratch

Course Overview

- Lectures (Monday 8-10)
- Supervised Labs (T-F)
 - 2 x 3hr
 - Groups of 4
- Teams
 - Your choice
 - Sign-up first lab session
 - Same section
 - Adjust after drop deadline
- Project
 - Servo
 - Individual
 - Evaluation : Week 7
 - Chapter + Appendix
 - Robot
 - Team
 - Evaluation : Week 13
 - Presentation + Report

Help me design this course!

What else do you need to know?

Laptops

- Install Software
 - SolidWorks (Mechanical CAD)
 - Readme file on download site
 - Download software from Solidworks.com
 - Altium (Electric Circuit CAD)
 - Readme file on download site
 - Download software on download site
- No Laptops during non-Demo lectures

LAB : MCLD 306

- No food / drinks
- Assigned Benches
 - Keep it clean
- Safety Training
 - First Lab session this week
 - BE ON TIME
 - Machine Shop
 - TBD

Course Grading

- Individual Project
 - 50% of final grade
 - 50% function
 - 50% report
- Group Project
 - 50% of final grade
 - 50% function
 - 25% presentation
 - 25% report
 - Self-Evaluation
 - Adjustments made at my discretion

Week #1 – Now!

- First Lab Session
 - Lab Safety Training
 - Sign-Up with Partners
 - Specify : Motor / Driver / Sensor / Controller
 - Begin planning
 - Project #1 is individual
 - Project #2 is group
 - OTS Parts Kit (1 per team)
 - 1 Gear motor
 - 1 Current Driver
 - 1 Encoder

Parts

- Database of In-Stock parts
 - Fill in order sheet (website)
 - TA must approve
 - Based on design drawings / simulations
 - 1 or 2 spares ok with some (cheap) parts
 - Deposit in order box
- Parts delivered to parts bin



3D Printing

- 200g / Team total
- Pre-approval optional
- Wasteful parts rejected on submission
- Order details in 3D Printing lecture

- Parts left in parts bin

After Break : Design

- RCGs
 - Requirements
 - Constraints
 - Goals

- Project Details