

Phase I (Interviewed Adoption) EE Capstone Project Ideas: 2011-12

In this phase, you are welcome to form your groups according to needs of the clients and according to the rules described in the syllabus. The following list contains contact information for those in charge of projects that will likely meet course requirements. **You are welcome to find your own projects according to the requirements described in the syllabus.** In other words, you do not need to select only from this list.

Students not successfully negotiating the creation of a project group by 4PM on Tuesday, 20 Sep 2011 will fall through to Phase II where a project lottery (using a different project list) is used.

If you agree with a client to pursue a project, then please complete the form provided at the following link and submit to the course submission box outside the ECE General office:
<http://www.ece.ualberta.ca/~ee401/PhaseI.pdf>.

This document will likely be updated through to Monday, 19 Sep 2011: please check back for updates, ensuring you reload the page.

Last Update: 5PM, 13 Sep 2011

Revision History:

15 Sep 2011 – Updated link in ECO Car project

14 Sep 2011 – Updated some project information, added projects 22, 23

13 Sep 2011 – Creation

No.	Client	Contact Info	Group Size	# Groups	IP	Project Title/Description
1	Eleven Engineering	Nick Schwinghamer (schwinghamer@eleveneng.com)	3	~6	Client	Various (many) projects by Eleven Engineering using their XinC2 Microcontroller: see http://www.ece.ualberta.ca/~ee401/Eleven_2011.pdf
2	Cleankeys Inc.	Steve Hole, CTO (steveh@cleankeysinc.com)	?	2+	Client	Infection Control Monitoring via Remote Sensor Packages
3	Eco-Car SVP	Jared Geisinger (geisinger@ualberta-ecocar.ca)	3	2	Client	MATLAB Power Simulation and Control Optimization: see http://www.ece.ualberta.ca/~ee401/2011_ECO_MATLAB.pdf
4	Eco-Car SVP	Jared Geisinger (geisinger@ualberta-ecocar.ca)	3	1	Client	Power Supply Control For Fuel Cell Modelling: see http://www.ece.ualberta.ca/~ee401/2011_ECO_Modelling.pdf
5	Eco-Car SVP	Jared Geisinger (geisinger@ualberta-ecocar.ca)	3	1	Client	Process Unit, Graphic Display, and Data Transmission Module: see http://www.ece.ualberta.ca/~ee401/2011_ECO_Processor.pdf
6	Dr. Duncan Elliott	elliott@ece.ualberta.ca	Various	Several	Varies	Many projects, including a 3D Ice Printer, Pipeline Leak Detection, Car Window Antenna: see https://www.ualberta.ca/~delliott/local/capstoneideas/
7	Dr. Petr Musilek	musilek@ece.ualberta.ca	3-4	1	Client	Power Management for Remote Monitoring Applications
8	Dr. Petr Musilek	musilek@ece.ualberta.ca	3-4	1	Client	Atmospheric-Level CO2 Sensor Rev 2.0 + Testing Plan
9	Dr. Jie Han	jhan8@ualberta.ca	1	1+	?	Variability-Aware Digital Circuit Simulations
10	Dr. Alan Lynch	alan.lynch@ualberta.ca	~2	1+	Student	ARM7-Based Helicopter UAV Autopilot
11	Dr. Yunwei (Ryan) Li	yunwei.li@ualberta.ca	3	1	Client	Development of a DC Drive System for a Wind Turbine Simulator
12	Dr. James McMullin	mcmullin@ece.ualberta.ca	?	?	?	Topic: Microfluidics
13	Dr. Jie Chen	jc65@ualberta.ca	?	?	?	Topic: Ultrasound Electronics Systems/Consumer Electronics: Wireless
14	Dr. Sandipan Pramanik	pramanik@ece.ualberta.ca	2-3	1	Shared	Plasmonic Biosensors
15	Dr. Mojgan Daneshmand	mojgan@ece.ualberta.ca	3	2	Shared	Wireless Sensor Network for Alcohol Detection
16	Dr. Karthik Shankar	kshankar@ece.ualberta.ca	4	1	Shared	Application of FFTs to Measure the Quality and Pattern Order of Nanotube Arrays
17	Dr. Mrinal Mandal	mandal@ece.ualberta.ca	3-4	1	Client:Shared	Electronic Nose for Consumer Applications V2"
18	Dr. Kambiz Moez	kambiz@ece.ualberta.ca	3	1	Client	Supercapacitor Notebook Battery
19	Dr. Kambiz Moez	kambiz@ece.ualberta.ca	3-4	1	Client	Smart (Tracking) Webcam
20	Dr. Wilsun Xu	w Xu@ualberta.ca	4	1	Client	Wireless Energy Monitoring Device (with iPhone Application): see http://www.ece.ualberta.ca/~ee401/projectinfo/2011_Energy.pdf
21	Jonathan Le	jple@ualberta.ca	4	3	Client	Low-Cost Stationary Bicycle Power Generator
22	Dr. Jie Han	jhan8@ualberta.ca	2	1+	?	Efficient Simulation Methods of Analog Circuit Elements
23	TR Labs	Dr. Pedram Mousavi (pedram.mousavi@trlabs.ca)	?	2	?	GPS Multipath Signal Error Cancellation: see http://www.ece.ualberta.ca/~ee401/projectinfo/2011_TRLabs.pdf