ECE 4012

James Steinberg (C-352)

Kevin Pham (C-356)

James Elder (C-356)

Senior Design Labs

- C356/C363 – SD Electronics Lab
  - Basic Tools
  - Bench Measurement Equipment
  - Soldering Stations
  - 24 Hours Buzzcard Access
- C357 – Machine Shop
  - Basic Hardware Supplies
  - Power Tools
  - 3-D Printer
  - PCB Milling
  - CNC Milling
  - Available Only When Staff Is Present

SD Lab Rules & Etiquette

- Safety Enforced
  - Googles
  - Gloves
  - Ear Plugs
  - Lab Coats
  - Fire Extinguishers
  - FAKs
- Clean/Shutdown Your Workspace After Every Use (Strictly Enforced)
  - No Eating, Drinking, or Smoking
  - No Bicycles or Roller Blades in the Lab
  - Shut Down Lab Equipment (Scopes, DMM, Soldering Stations)
  - Place Test Leads Back Onto Racks
  - Recycle/Trash Discarded Materials Appropriately

SD Lab Rules & Etiquette (Cont.)

- No Horse Playing

- Do Not Abuse Lab Equipment

- Security Cameras Are Present

- Report Any Injuries to Kevin Pham or Myself No Matter How Small

- Report Violation Of Lab Rules

SD Check Out Form

Senior Design Parts Checkout Form

Name:		Professor:	
E-Mail:		Section#:	
Phone#:		Group#:	
Date:			

Quantity	Item Description	Model#	Serial#

SD Ordering Form

Senior Design Ordering Form

Name:		Professor:	
E-Mail:		Section#:	
Phone#:		Group#:	
Date:			

	Item	Supplier	Part#	Manufacturer#	Qty	Price
Primary	1A					
Direct Link:						
Description:						
Alternative	1B					
Direct Link:						
Description:						

	Item	Supplier	Part#	Manufacturer#	Qty	Price
Primary	2A					
Direct Link:						
Description:						
Alternative	2B					
Direct Link:						
Description:						

	Item	Supplier	Part#	Manufacturer#	Qty	Price
Primary	3A					
Direct Link:						
Description:						
Alternative	3B					
Direct Link:						
Description:						

SD Check Out/Ordering Notes

- SD Check Out
  - Check Inventory Before Ordering (Microprocessors, Sensors, Hardware, Etc)
  - Does Not Count Against Budget
- SD Ordering
  - Cannot Exceed Budget (~$400-$500 Group; ~100 Individual)
  - Group Orders By Vendor
  - Check Available Vender Inventory
  - Give Alternative Part #s
  - If Number of Orders Exceeds Form Lines, Then Copy Format and Continue Numbering Lines (e.g. 4A, 4B, 5A, 5B, Etc.)
- Forms Found On Senior Design Website
  - Do Not Copy Form From PP
  - Type Up Forms

SD Check Out/Ordering Notes (Cont.)

- Cannot Use Excess Budget To Order Pizza :P

- Avoid EBay/PayPal Payments

- DO NOT Use Your Own Money
  **Disclaimer: You Will Not Be Reimbursed

SD Resources

- Workshops (Schedule/Signups Found In E363) – Free & Required
  - Basic Tools
  - Through-Hole/Surface Mount Soldering
  - Connectors
  - 3D CAD/Printing
  - PCB CAD/Milling
- Locker Checkouts For Project Storage
- PCB Fabrication (2 Layers w/ Vias)
- 3D Printing
- Software Purchased – Must Be Installed/Uninstalled By Staff
- General Consultations

Resources

1. www.findchips.com

2. www.octoparts.com

3. www.google.com

- Type in the part #, description, manufacturer # of various components.

Resources

- Request Free Chip Samples/Dev Kits
    - TI.com (Texas Instruments/National)
    - Analog.com (Analog Devices)
    - Microchip.com (MicroChip)

- Popular Company To Order Parts:
    - Digikey (Electronic Components) – Online
    - Newark (Electronic Components) – Online
    - Mouser (Electronic Components) – Online
    - ACK Radio (Electronic Componnts) – Local B&M
    - Amazon (Misc) – Online
    - Grainger (Industrial Hardware) – Online
    - McMaster-Carr (Industrial Hardware) – Online
    - Home Depot (Hardware) – Local B&M
    - Harbor Freight (Hardware) – Local B&M

Senior Design Tips

- Come In Early (Work Hours 7AM-4PM)

- Order Early – Be Aware of Shipping Times

- Be Aware of Chip Package When Ordering (e.g. DIP/SMT)
  - If You Need A SMT-DIP Adapter, Order the Appropriate Adapter
    - http://www.proto-advantage.com/store/
    - http://www.omega-research.co.uk/prototyping_adapters.html
    - http://www.beldynsys.com/

- If You Are Unsure Of Anything, ASK!

Contact Information - Staff

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**Be Sure To Check TA Specialties/Office Hours