

# Final Stretch to ECE Day Presentation and Submission Requirement



**EECE404 Senior Design II**  
Electrical and Computer Engineering  
Howard University

Instructor: Dr. Charles Kim

[Charles Kim – Howard University](#)

# ECE Day (R 4/17/14) Program

## Special Thanks

Mr. Carlton Blue	Georgia Power
Mr. Allen Kelly	Northrop Grunman
Mr. Gregory West	Northrop Grunman
Mr. Clifford Flowers	Olgoonik Global Security, LLC
Mr. Goyer Roberts	
Dr. Deidre Spaulding-Yeoman	United States Nuclear Regulatory Commission
Mr. Anthony Waterman	Waterman Engineering & Consulting
Mr. Nicholas Xenos (ECE Day Keynote Speaker)	Juniper Networks

## Department of Electrical & Computer Engineering



April 17, 2014

Armour J. Blackburn Center

# ECE Day (R 4/17/14) Program

- 08:00 – 08:30 Come to Lab for Moving stuffs to the Blackburn
- 08:30 – 09:00 :Demo Table Set up

## Schedule of Activities

8:30-9:00 am Registration and Continental A La Carte Breakfast

9:00-9:15 am **Welcome & Overview - Forum**  
Dr. Mohamed F. Chouikha, Chairman  
Department of Electrical & Computer Engineering

### Part A:

9:15-11:10 am Senior Design Presentation

**Team 1: "Bus Boy Robot"**  
**Team Members:** Mwandu, Cecily Gomes, Caleb Davis, Bethany Robinson, and Ibukun Osei  
**Advisor:** Dr. Charles Kim (Howard University)

**Team 2: "Innovative Solution for Energy Efficiency in Buildings"** (DOE Better Building Case 2013 Applicant)  
**Team Members:** Alexis Wells, Monica Burnett, Venessa Woodson, and Lakeasha Williams  
**Advisor:** Dr. Charles Kim

**Team 3: "Eye View Navigation System"** (Cornell Cup 2014 Finalist – Team EyeView5)  
**Team Members:** Emmanuel Ademuwagun, Yusuf Siyanbola, Zachary Spence, Patrick Buah, and Jordan Wren  
**Sponsor:** Cornell Cup 2014/Intel  
**Advisor:** Dr. Charles Kim (Howard University)

**Team 4: "Integration of Distributed Generation to Power Grid"**  
**Team Members:** Tiago Nunnes Barbi Costa and Phathom Donald  
**Advisor:** Charles Kim (Howard University)

**Team 5: "Mobile Air Purifier"**  
**Team Members:** Raymond Jones, Charles Brown, Kenneth Booker, Warren Spencer, and Von Miles  
**Advisor:** Dr. Charles Kim (Howard University)

**Team 6: "Perimeter Monitoring"**  
**Team Members:** Jonathan Applewhite, Brittany Jackson, and Tesfayohnes Woldselassi  
**Sponsor:** Northrop Grumman  
**Advisor:** Gregory West and Allen Kelly

11:10-11:20 am Break

### Part B:

11:20-12:00 pm Poster Session - Gallery Lounge

### Part C:

12:00-1:20 pm Lunch - Hilltop Lounge

Remarks & Introduction of the  
**Keynote Speaker:** Mr. Nicholas Xenos  
of Juniper Networks

1:20-2:00 pm Awards and Photo Session

2:00 pm Adjourn

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Demo

# ECE Day (R 4/17/14) Format

- **Part A: Presentation**
  - Formal presentation in the auditorium
  - Presentation only, therefore, presentation needs some visual display of the final product **with video clips** for example
- **Part B: Poster Board + Demonstration**
  - A table is assigned to each team
  - A poster board is set against the wall
  - Demo system in front of the poster board



# ECE Day Grading Sheet – Example 2013

23rd ECE Day April 18, 2013 Blackburn Center Howard University

PRESENTATION & DEMONSTRATION SCORE SHEET							
* Instruction for judges: Please grade Sections A & B for the presentation, and Section C for the Demo and Poster Session.							
Grading scale: Excellent(4) Good(3) Fair(2) Poor(1) Fail(0)							
Name of Evaluator							
<p>Senior Design focuses on experiencing all the phases of problem solving: Problem Formulation, Design Requirement under Constraints, Solution Generation and Top Design Selection, Implementation, and Evaluation. Also, Risk Identification and Management throughout the project period is encouraged.</p>	Solar Water Purification System						
	Automated Reconfiguration System						
	Smart Backpack						
	Grid-Eye Thermal Detection						
	Bus Bot						
		P1	P2	P3	P4	P5	
A1. Clear Description of Problem with Background and Needs						A. Problem Solving	
A2. Well Defined and Quantified Design Requirements							
A3. Sound Technical Approach for Solution Generation							
B1. Professional Presentation with Direct Eye Contact						B. Technical Communication	
B2. Demonstration of Full Knowledge of the Subject							
B3. Well Organized Topics and Contents with Good Visuals							
C1. Clear Explanation of the Essence of the Demonstration						C. Demonstration	
C2. Satisfactory Level of System Integration for the Project							
C3. Does the System Meet the Design Requirements?							
Overall, give an extra point if you want {0 - 4}						Extra point	
	<b>TOTAL</b>						[40]
COMMENTS							
(Use back side also if necessary)							

# Toward the Goal Line

- April 2: Breather Week (with this lecture)
- **April 9:** (a) Dress Rehearsal (use **Final Presentation Format**)
  - (a1) Dress Code: **Business/Smart Casual**
  - (a2) Dr. John Rowe will facilitate and grade(b) Poster Design
- **April 16:** Final Class Presentation + Poster + Demo  
Dress Code: **Business**
- **April 17:** ECE Day  
Dress Code: **Business**
- April 23: (a) Submission of **Final Report** (Spiral bound x4 copies & Soft Copy) and **Project Binder**
  - (b) Return DE2i-150, Galileo, Arduino, Sensors, and all components
  - (c) Peer Evaluation
- April 24: (a) 3:00pm Grade posting for PG



# Dress Code - revisited

- April 9 Presentation + Demo: **Smart Casual**
- April 16 Final Rehearsal for Presentation + Demo + Poster: **Business**
- April 17 ECE Day: **Business**

# Final Presentation Format – Use this from now on

- **Cover (1 slide)**
  - Title and Members
- **Background (1 - 3 slides)**
  - Background of the project (industry, technology, customer, etc)
  - Needs and demands in customer's point of view
- **Problem Definition and Design Requirements (1-3 slides)**
  - Refined Problem Definition in Engineering point of view
  - Design Requirements: emphasis on constraints and rules and regulations
- **Current Status of Art (1 - 3 Slides)**
  - Prior art and available technology, weakness, etc
- **Solution Approach (2- 4 slides)**
  - Explanation of the solution with schematics and diagrams
- **Implementation (2 - 4 slides)**
  - Assigned tasks for solution implementation
  - **Photos, screen shots, circuit diagrams**, etc, etc.
  - Testing of the integrated system
- **Testing and Evaluation (2-4 slide)**
  - Performance of the system against design requirements
  - **Video clips**
  - Discussion on the performance.
- **Costs and Resources (1-2 slides)**
  - Bill of parts
  - Resources used and provided
- **Conclusions (1 slide)**
  - Crisp and clear summary of the project



# Team Presentation - Revisited

- **Format**

- Equally divided presentation times
  - First, tell the audience who is going to talk on what
  - Take turns
  - Then, the first person concludes
- Dialogue Style presentation
- Tag team presentation
  - Anchormen and remote correspondents

- **Tips**

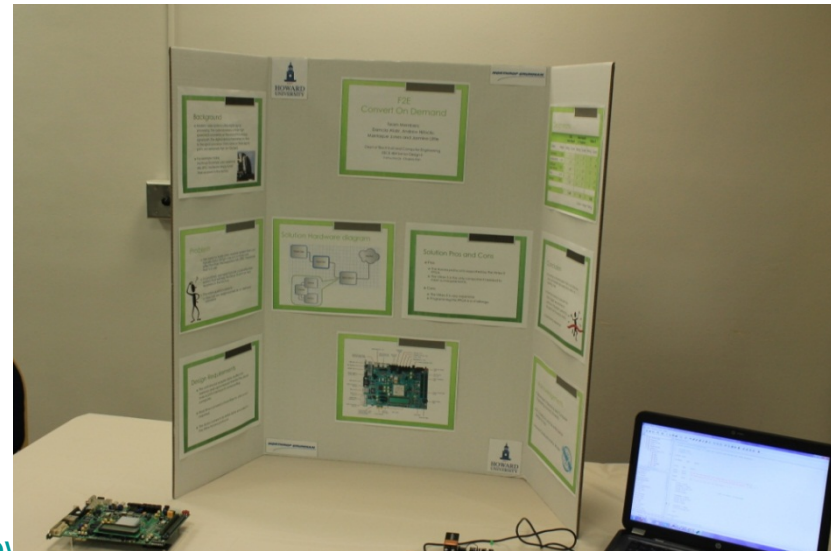
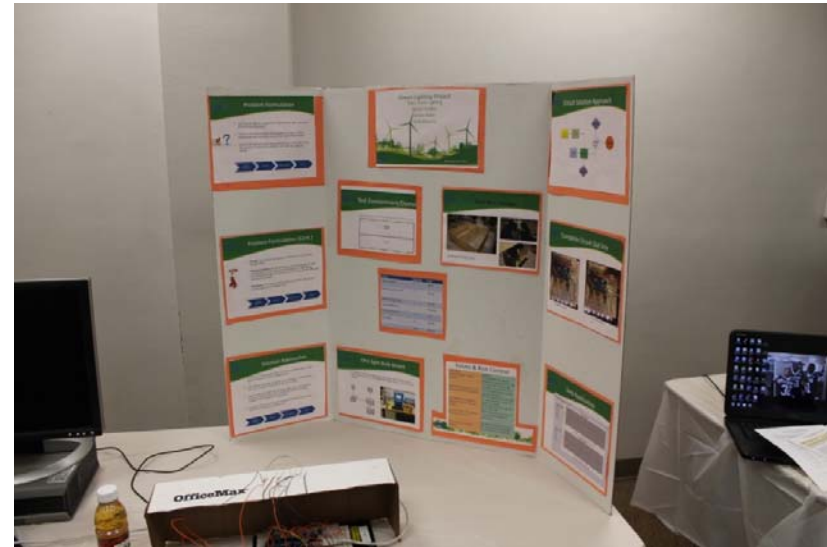
- Plan ahead and do practice, a lot.
- Everyone should share the presentation
- Smooth Transition from a presenter to another
  - A presenter should wrap up own segment,
  - then build a bridge that links what they said to the next presenter
- Decide Position and Roles in advance
  - how you will position yourselves
  - who will be where and
  - what they will do while another member is speaking?
- Take pains to make sure that
  - Everyone in the group is doing their share
  - Everyone performs well on your presentation

# Poster Preparation

- Poster should quickly orient the audience to the subject and purpose.
- Specific sections such as the results should be easy to locate on the poster
- Design the individual sections of a poster so that they can be quickly read.
- **Sample Posters** are available in the class note webpage (year 2010-2011 page) – See next few slides



# Posters



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# Effective Technical Communication

- Precise and Complete
- Grab and hold audience interest
- Present materials understandable by audience
- Video clips
- Photos & Pictures
- Preserve simplicity
- Eye Contact
- Check Audience
- Be Prepared
- Practice and take pains
- Roles and Smooth Transitions



# Final Report Guideline

## Final Report Submission Instruction

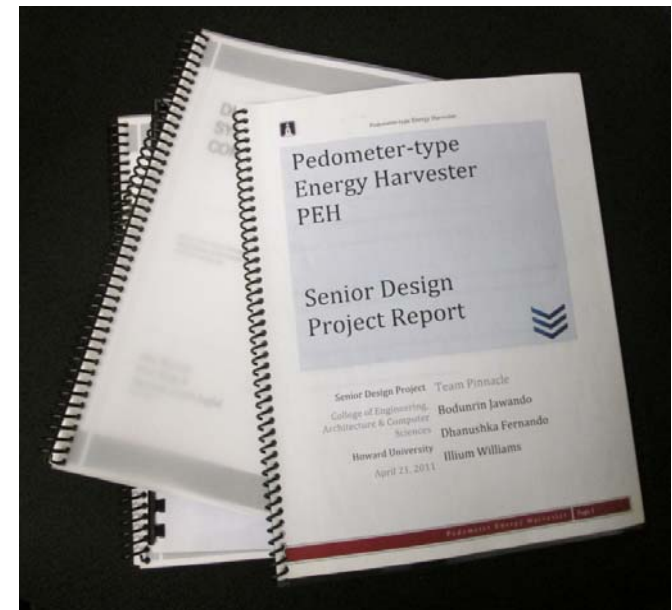
### A. General Guideline

1. A report must be signed, at the certification page, by team members as well as the technical advisor (if you have one) or by the course instructor. A report without signatures will be rejected. No excuses.
2. Submit 4 spiral bound copies of the final report to the instructor. Each report will be distributed to the technical advisor or instructor, the project team, ECE Department, and the instructor). In addition, submit a complete softcopy of the final report in a MS Word file to the instructor.
3. Page format of the report: Single column, one side, 12 font Times New Roman, double spacing, 1 inch margin in all sides, maximum 40 pages excluding appendix, and page number at the bottom center.
4. Cover sheet of the report must indicate: project title, project team and team members, date of the report submission, class ("Senior Design) designation
5. The certification page should have wordings like "We certify that this is an accurate Final Report and we are in agreement that this report is an accurate representation of the Project." and printed name lines & signature/date lines for the team members. Also, below the above certification lines, there must be another certification with wordings like "I certify that this report is an accurate representation of the Project and I approve it." and printed name & signature/date line for the advisor/instructor. (See Page 2 for Example)
6. Submission Deadline: Follow the instruction of your teacher.

# Final Report Format

## *B. Final Report format*

	page
Cover Sheet	i
Certification Page	ii
Acknowledgements (1 page if any)	iii
Executive Summary (1 page)	iv
Table of contents (1 page)	v
I. Background	1
II. Problem Formulation and Current Status of Art	etc
III. Constraints and Criteria of the Design Requirements Technical (Standard, regulations, rules, etc)	
IV. Solution Generation and Selection of Top Design	
V. Implementation of the Top Design	
VI. Performance Analysis and Evaluation of the Project Results/Hand calculation Simulation/Experimental Tables/Graphs Evaluation against the design requirements	
VII. Conclusions	
VIII. Recommendations	
IX. References	
X. Appendixes	
A. Final Design Requirement	
B. Final Design Proposal	
C. Source Code Listing (if any)	
D. Design Details (if any)	
E. Resumes of all team members	



# Examples of Presentation + Poster Design + Final Report

- Web link: For **Final Presentation + Poster Design**:  
<http://www.mwfr.com/SD1112.html>

## 5. Preparation for Final Presentation and Poster

### (a) FINAL COMPLETE PRESENTATION

[Final Presentation Contents and Tips](#) ( Example Presentations : [Example 1](#), [Example 2](#),

### (b) POSTER PREPARATION (which goes with Demonstration)

[Perfect Poster](#) (Poster Preparation Instruction). Source: American Psychological Association

[Scientific Poster Design](#) (Link to the source - Cornell University)

[Design of Scientific Poster](#) (Link to the source - Penn State University)

- **Web link:** <http://www.mwfr.com/SD1112.html>

## 6. Life after the ECE Day

### (a) Final Report Submission

[Final Report Preparation](#)

Example Final [Report 1](#) & [Report 2](#)

### (b) Project Binder Submission

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# Recap -- Schedule

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