ENGINEERING EXPO
April 23rd, 2013
Tuesday

24th
Senior Design Competition
The following slides have been prepared to guide you through the EXPO process. **You are responsible for knowing this information.**

We have included the following:
- General EXPO information
- Judging criteria
- Important project presentation features
- Critical dates
- Sample Abstract and Poster Example

**BE SURE TO REVIEW ALL SLIDES**
DATES/ DEADLINES to KNOW


ALL Participants MUST Register-use EXPO site

PHASE II - February 14th – 19th - Abstract Submittal - Deadline February 19th midnight

No changing your project, abstracts MUST be submitted by midnight Feb 19th for inclusion in EXPO Program Book. You may submit it early!

Only one (1) team member submits abstract.

April 16th - Sending Photos. If your photos are NOT received by midnight April 16th, they will NOT be used in the EXPO slide show (further info in other slide)

APRIL 23 – TUESDAY – EXPO!
Your Chairs for EXPO 2013

- **General Chair:** Chris Kuypers  
  College of Engineering

- **Faculty Chair:** Dr. Houshang Darabi  
  Dept. of Mechanical and Industrial Engineering

- **Student Team:** Engineering Council, et al
# EXPO Schedule

**Location:**

Student Center East (SCE)  
3rd floor, Illinois Room  
You will be assigned a table  
(Floor plan to be posted before event)

**Time:**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 – 9 a.m.</td>
<td>Project Set-up</td>
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<tr>
<td>9:00</td>
<td>EXPO opens to public</td>
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<tr>
<td>9:30-11:30</td>
<td>Project Judging</td>
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<tr>
<td>12:00</td>
<td>Robotics demonstration</td>
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<tr>
<td>(Lunch on your own or box lunch compliments of EC)</td>
<td></td>
</tr>
<tr>
<td>1:30-2:30</td>
<td>Awards</td>
</tr>
</tbody>
</table>
WHO will be there, WHAT to wear??

Industry and Faculty judges, friends and family, students and students “off the street”

DRESS CODE

Business attire – “all about the outfit”

Gentlemen: suits, blazers, ties
Ladies: skirt suits, pant suits

NO Jeans  NO  T-Shirts  NO Shoes  No Service
EXPO EXTRAS – Bring the following:

- Poster Board
- Prototype product
- Your lunch (or you have to buy it!)
- Informational flyers
- DUCT TAPE
- Your computer – if you need internet, only WIFI is available – only wireless laptops (No other hookup available!)
- Power strip for additional outlets
Special Request Items

- Easel – we will provide it

- Power Outlet – SUPPLIED (only one so bring a power strip if you need more!)
WHAT WE NEED TO KNOW...

(Indicate on your EXPO registration form)

- Is your project noisy?
- Is your project dangerous?
- Will it bite someone?
- Possible RF interference with other groups
- For a large item, one table is provided, do you really need more space to demonstrate it?
What you need to do NOW……

- KNOW YOUR PROJECT TITLE and be sure that everyone on your team knows the correct title!

- PREPARE YOUR ABSTRACT BY DEADLINE

- Take photos of your project with members working on it. NO ‘vacation photos’ of members just standing together…then…..

Select TWO (2) good photos and send to:

tmatthes@uic.edu

In subject area-type:  EXPO Photos
Who will judge?

- UIC faculty
- UIC College of Engineering Alumni
- Other Engineers from Local Industry
Expo Project Judging

What are the judging criteria?

50%: Design
50%: Presentation
Design-Oriented Criteria:

1. Was the project objective clearly identified?

2. Were design alternatives evaluated with realistic constraints (economic, environmental, social, ethical)?

3. How well was the overall objective satisfied?
Expo Project Judging

Design-Oriented Criteria:

4. Were factors influencing the design adequately considered (cost, manufacturability, sustainability)?

5. How innovative was this project?

6. How practical was this project in view of contemporary engineering standards/practice?
Expo Project Judging

Presentation-Oriented Criteria:

1. General communication
2. Knowledge of the background material
3. Organization & clarity of presentation
Expo Project Judging

- Presentation-Oriented Criteria:
  4. Project description in the program booklet
  5. Group interaction (teamwork)
  6. Quality, effectiveness, & use of visual aids
Expo Awards and Prizes

Projects will be assigned to one of 12-14 categories.

For each category there will be a 1st place prize and 2nd Place acknowledgement.
EXPO Program Booklet will include:

Welcome statement from the COE Dean
EXPO Time Schedule
List of Project Judges
Index by Project Category
Index by Department
Project Abstracts
Floor Plan
As society progresses through the Era of Technology, the visually disabled are left behind. Many visually impaired individuals have jobs, but they are limited in what they can accomplish. An example of this is a blind person’s limitation of using a computer. We have developed a refreshable Braille display that can display text in a file in Braille format. There are existing products for refreshable Braille displays, however they are very expensive. Our goal is to make a design that achieves the same task, but at a much lower price. The two main components of our design consists of six solenoids and a stepper motor. When a solenoid is fired, it strikes a retractable switch which raises a single dot on the Braille board. Six solenoids are used to output one Braille character. A stepper motor moves these six solenoids up and down over the Braille board, eliminating the need for dedicated machinery for each dot in the Braille display.
Writing an Abstract

- #1--Select your best writer on your team!!
- Why did you design your product?
  (describe the problem to be solved)
- What did you design?
- Does your design satisfy the design goals?

**ABSTRACT MECHANICS**

1. Font shall be Arial – 10
2. Word limit in that font size: DO NOT exceed 250 words in the abstract body (or Chris will edit it down!) Note: both margins shall be justified.
Writing an Abstract

- Have a logical flow from one sentence to the next
- Your abstract should be understandable to a general engineering audience
- Double-check spelling and grammar!
- Do not define acronyms needlessly

(For ABSTRACT problems or issues, contact your Senior Design Instructor. Be sure to have him/her PROOFREAD your abstract)
Most Common EXPO-Related Issues

1. Teamwork – if you experience a situation affecting your project, seek mediation assistance! Resolve the issue!

2. Address the needs of EXPO – deadlines need to be followed and information submitted!

3. Time management – Your project MUST be ready for April 23rd. Plan accordingly – work on a timeline that will allow you to complete your project. Judges want a finished project as do your senior design Instructors!

4. Take advantage of EXPO -- this is a great future interview topic and item for your resume!

(For issues regarding the above, contact either your Senior Design Instructor or Chris Kuypers)
Preparing a Poster for EXPO

Common poster sizes are 24” or 36” tall, 48” wide.

Compare prices for posters - a very economical place to print posters of this size: MakeSigns.com in Tinley Park, IL.
or compare them to other locations.

They have Powerpoint templates posted there.
The Engineering Senior Design EXPO and Multidisciplinary Projects at UIC

Vladimir Goncharoff (ECE), David Schneeweis (BioE) and Christine Kuypers (COE)

Abstract

Every Spring Semester the College of Engineering at UIC sponsors an exhibition of senior design projects from all eight of its engineering departments. In addition to projects from different departments with different senior design courses requirements and on display at the same event. The poster overview will describe the Engineering Senior Design Expo, explain its organizational goals/methods/difficulties, and describes our attempts at creating multidisciplinary design teams.

Introduction

The Engineering Senior Design Expo is an event that takes place near the end of the Spring Semester at the University of Illinois at Chicago (UIC). It brings together hundreds of students from various College of Engineering departments to showcase their senior design projects and compete for recognition and monetary awards. The Expo not only publicizes the undergraduate programs and student achievements of the College, but also serves as a means to re-establish ties with alumni. The Expo is also an excellent tool with which we satisfy many of the ABET engineering program requirements, is used to aid in recruitment, and provides structure for interdisciplinary design experiences for undergraduate students. There are many non-negative aspects of organizing such an event by a college of engineering other than the extra efforts required by staff, students, and administration. This paper summarizes what we have learned from many years of hosting the Engineering Senior Design Expo at UIC as a guide to those universities considering hosting such an event for the first time.

From a Student's Perspective

Students in every UIC College of Engineering senior design course know from the start that their project will culminate by being exhibited at the Expo. The fact motivates most students to select an interesting design topic, stay on schedule, and most importantly put in much effort to prepare a product demonstration or poster for the exhibition. Approximately one month before the event we email each student group asking them to register using an online form. Then they submit project abstracts, detailed design team member information, advisor, and/or sponsor information, and any special needs requests such as electrical power outlets, extra exhibit spaces, etc. Once the technical chair compiles student abstracts into a photo of this program booklet, the document is emailed back to all students and faculty senior design instructors for their proofreading and correction. On the day of the Expo, doors to the hall open at 7:30 am so that students may set up in time for the judging to begin at 9:30 am. All students wear business attire, if interviewing for a job. During this judging period each design team is visited by a group of 3-5 faculty and industry judges, to whom they present their project and any necessary questions. The design teams also receive numerous questions from visitors to the event, which concludes at 2 pm by awards ceremony for students winning first or second place in their project categories. All students receive a small token of appreciation for their participation in the event.

Technical Chair

The Technical Chair of the Expo is responsible for soliciting student submissions of project abstracts, preparing them, then compiling them into a photo for publication so that they may be published in the Expo program booklet. On the day of the event the Technical Chair gives instructions to the judges, and takes part in the awards ceremony.

General Chair

The General Chair of the Expo is responsible for the organization, planning, and execution of the event. For this reason, this person should not be a member of the faculty, but instead a member of the college administration—there is simply too much work to do as an extra volunteer activity. The General Chair coordinates all Expo-related tasks, such as dealing with student societies at UIC who do this through the Engineering Council, an umbrella organization for all engineering student organizations, interfacing with the Technical Chair, breaking the hall, publishing a program booklet, etc.

From a Judge's Perspective

Any alumna or alumnus of the College of Engineering is eligible to serve as an Expo judge. These judges are recruited by small mailings, announcements in college newsletters, and in some cases individually by telephone. A very important function served by the Expo is to recruit college alumni by inviting them back to campus to serve as judges. We also learn small donation from their companies to help fund the Expo monetary awards to students. Many judges find it wonderful to serve in this way, and college staff make sure that their trip back to campus is an enjoyable one. Judges are provided breakfast, then lunch after judging is over. Each give a nice token of appreciation for their participation. Based on opinion surveys that judges are asked to fill out, most are impressed by the Expo experience and are eager to serve again as judges in future years.

Conclusion

The UIC Engineering Senior Design Expo—

- creates opportunities for students to publicly present their senior design projects and compete for prizes;
- creates ties with our alumni;
- strengthens the curriculum’s conformance to ABET requirements;
- aids in recruiting freshers students;
- gives our seniors opportunities for interdisciplinary design project experience.
This official UIC logo is the required format should you decide to use it on your poster.

http://tigger.uic.edu/htbin/identity/BROWSE.CGI
Questions? We wish you success!
Thank you

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