



UNC CHARLOTTE

The WILLIAM STATES LEE COLLEGE of ENGINEERING

Senior Design Newsletter

Vol. 8, No. 2, April 2013

Save the date: Spring Expo – May 2, 2013 8:00 AM to 3:30 PM

Spring Expo

At the spring Expo 43 completed Senior Design II projects will compete for best project. The best project will be determined from a combination of graded assignments over two semesters as well as recommendations by faculty, mentors and project supporters. Industry participation continues to grow. We now are supported by 29 different companies. We look forward to continuing our relationship with all of our supporters.

Spring Projects have Sprung!



This January we kicked off the 26 projects listed below and we are ecstatic to see all the new projects that will be worked on this year. Local companies are supporting 22 of these projects. We have 91 students participating in these 26 projects. All of these projects will be on display at the Spring Expo. These projects were kicked off at the Senior Design Breakfast, held on campus on January 25. At the breakfast the project supporters, faculty mentors, and student teams met to discuss the initial project requirements. We thank everyone who braved the weather that morning to participate.

Spring Expo



Congratulations to our Senior Design Team “EPRI Boiling Water Reactor Instrumentation Nozzle Scanner”. At the recent ASEE (American Society for Engineering Education) annual Southeast Conference hosted by Tennessee Technological University their poster from the Fall 2012 Expo won 3rd place. This is very impressive since they had to earn an invitation just to compete at the conference.



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SPRING 2013 SENIOR DESIGN I PROJECTS	COMPANY SPONSOR
2014 FSAE Body Aerodynamics	UNC Charlotte
Automated Filling Station	Concord Terrazzo
Automated In-Line CO ₂ Verification	RSC Chemical Solutions
Axial Fan Blade Attachment Method	Siemens
Baffle Material Analysis Team 1	Siemens
Bearing Design Friction Analysis	Schaeffler Group
Boiling Water Reactor Instrumentation Nozzle Scanner	EPRI
Smart Home Automations System Design	Schweitzer Engineering Labs
Closed Loop Cooling Water System	CB&I
Design and Launch a Near Space Balloon to Stratosphere	NASA / UNC Charlotte
Design Functional Work Station / Monitor Security System	UNC Charlotte / Mosaic
Design of a high efficiency and cost effective Portfolio of DC Power Loads for Residential Customers	EPRI
Design Optimum Emergency Power Source Using Existing Automobiles	EPRI
Design, Finite Element Analysis, and Testing of a Race Seat	ISP
Develop Working Demonstration of Virtual Models and Ability to Apply in Training Program	AREVA
Dr. El-Ghannam's Research Project	UNC Charlotte
Evaluate Coal Plant Design Team 1	EPRI
Harnessing River Power for Remote Mission Hospital	Powerhouse Mechanical
Optimization of a Sprint Car Aerodynamics	Student
Photovoltaic (PVTE) Device for Energy Harvesting in Building Envelopes	EPIC
Plant Energy Consumption Analysis	SPX Corporation
Semi-Automating Rotor Coil Installation	Siemens
Simulation of Automobile Heat Exchangers in Subscale Models	Chrysler Group LLC
Transmitting Power Through Medium Frequency Grids	AREVA
Variable Frequency Drive Study	CB&I
Water Powered Generators Engineering Update	Char-Meck Utilities

FALL 2013 SENIOR DESIGN

The deadline for submission of Fall 2013 projects is July 1, 2013. The cut-off date will be here soon so please get your project submissions to Terry Jordan, Interim Director for Industrial Solutions Laboratory, the Lee College of Engineering (tdjordan@uncc.edu) as soon as possible. Details of project requirements are found on the website: <http://srdesign.uncc.edu/company-information.html>.



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FOR INFORMATION OR QUESTIONS

Visit www.srdesign.uncc.edu or contact Terry Jordan at 704-687-5027 tdjordan@uncc.edu.

THANK YOU TO OUR SUPPORTERS

Thank you to all our Spring and Fall 2012 supporters for your commitment to the Lee College of Engineering Senior Design program!

*Areva
Carolinas Aviation Museum
CB&I
Charlotte Green Initiative
Charlotte Research Institute
Char-Meck Utilities
Chrysler Group
Concord Terrazzo
Doosan
EPIC*

*EPRI
Highland Industries
Huber Technology
ISP
MacLean Power Systems
Matthews Help Center
MOSAIC
NASA
Nirak, Inc.
Powerhouse Mechanical*

*Radiator Specialty Company
RSC Chemical Solutions
Schaeffler Group
Schweitzer Engineering Labs
Siemens
SPX Corporation
Strategic Power Systems
USAF Research Lab
Westinghouse*

2013 SCHEDULE OF EVENTS

Be sure to mark your calendars for key upcoming events:

May 2 (Thursday): SPRING EXPO, Barnhardt Student Activity Center Arena, OPEN TO PUBLIC 11 AM – 3 PM

July 1: Deadline for Fall 2013 project submissions

Please REPLY with “REMOVE” if you do not want to receive future issues.