

Challenge X 2008

Marketing Program Final Report

Instructions: Use this template to provide your team's marketing program final report. Final Reports are due on May 7, 2008. Each of these reports must be posted as a PDF or Word document to your team website by the due date as well as sent by email to lpalombo@nrcan.gc.ca.

Team:

University of Tulsa

Name of Outreach Coordinator:

Mari Riera

Phone number and email of Coordinator:

(918) 361-9532; mari-riera@utulsa.edu

Dedicated Outreach Coordinator (Y/N):

Y

Date posted: 7 May 2008

I. Marketing Plan – 5 points

- Some changes that were made to the marketing plan include the team being featured in local media outlets via TV and print. Our target market was also expanded.
- The values of these changes were that it increased the team's visibility, and reached out to individuals originally not foreseen in the plan. Because TV and print media were used, more people outside the target audience learned about Challenge X.

II. Marketing Activity Detail

A. Media Relations - 5 points

Please list each media hit your team has received since last competition. Please provide copies of any media clips in the Appendix.

Media Type (Television, Radio, Print)	Media Outlet and Reporter's Name	Date	Location	Coverage Origin (List name of News Release or Event)
Print	TU Vision News	Fall/ Winter 2007	Tulsa, OK	TU Wins Award at Challenge X 2007
Television	Good Day Tulsa, KTUL Channel 8	22 April 2008	Tulsa, Ok	TU goes green for Earth Day

B. Outreach – 5 points

Please use the chart to provide a list of all of your outreach activities since the last competition. Also provide a written description below with additional details for each outreach activity listed. Please number your events below.

Activity	Date	Location	Audience	Participants <i>(Briefly describe which team members participated)</i>
Tulsa Engineering Challenge	15 April 2008	Tulsa Technology Center	Area Middle School and High School students	Amanda Emnett, Mari Riera, Dr. Christi Patton, Dr. Bob Strattan
Earth Fest	19 April 2008	Tulsa Zoo	Tulsa Community	Andrew Harmon, Kyle Hanneman, Amanda Emnett, Mari Riera
Earth Day	22 April 2008	TU campus	University of Tulsa Students and Faculty	Andrew Harmon, Scott Rainwater, Kyle Hanneman, Amanda Emnett, Mari Riera, Dr. Christi Patton
High School Chem-E-Car Competition	24 April 2008	Keplinger Hall	Area High School students	Amanda Emnett, Kyle Hanneman, Scott Rainwater, Dr. Christi Patton

1. Activity name: Tulsa Engineering Challenge Date/Time: 15 April 2008
Location: Tulsa Technology Center
Team participants: Amanda Emnett, Mari Riera, Dr. Patton, Dr. Strattan
Audience: Area middle school and high school students
Activity description/details: The Challenge X vehicle was on display for students to explore and ask questions
Key Messages Covered: How engineering can be applied to future technology in everyday things.
Any measurable results: Students learned what hybrid vehicles were.
Photos:



Mari Riera talks to event sponsors about our Challenge X hybrid vehicle.



The students had lots of good questions for Mari!



The middle school and high school students enjoyed fantasizing about owning this hybrid vehicle!

2. Activity name: Earth Fest Date/Time: 19 April 2008, 9am-5pm
 Location: Tulsa Zoo
 Team participants: Andrew Harmon, Kyle Hanneman, Amanda Emmett, and Mari Riera
 Audience: Tulsa Community
 Activity description/details: Earth Day celebration at the Tulsa Zoo. There were various "green" activities, and other go-green vehicles on display throughout the zoo.
 Key Messages Covered: What can be done today to go green, and help with fuel economy. What technology of the future will be. The best idea for a hybrid vehicle concerning alternative fuels.
 Any measurable results: Educated people on the different types of hybrid vehicles, and what the future holds for sustainable mobility as well as the importance of going green.

Photos:



Kyle Hanneman and Andrew Harmon speak to some interested citizens about hybrid technology at the Tulsa Zoo during Earth Fest.

3. Activity name: Earth Day Date/Time: 22 April 2008, 1pm-4pm
Location: University of Tulsa "U"
Team participants: Kyle Hanneman, Andrew Harmon, Scott Rainwater, Amanda Emmett, Mari Riera, and Dr. Patton
Audience: University of Tulsa Students and Faculty
Activity description/details: The Challenge X Vehicle was on display for students to learn how their fellow students were making an effort to go green as one of the activities planned for the University's celebration of Earth Day.
Key Messages Covered: How the vehicle actually works and how it contributes to "going green"
Any measurable results: More students learned about Challenge X, what hybrid vehicles are, and how they could help the environment.
Photos:



Early in the day, the local ABC affiliate came by to interview team members.



Students on the U during Earth Day at the University of Tulsa with Kyle Hanneman, at the vehicle.

4. Activity name: High School Chem-E-Car Competition
Date/Time: 24 April 2008, 1pm-6pm
Location: Keplinger Hall
Team participants: Kyle Hanneman, Amanda Emnett, Scott Rainwater, and Dr. Patton
Audience: Prospective TU students, and area high school students
Activity description/details: Students were in the engineering building for an engineering design competition. The vehicle was on display in order to spark interest among the future students, and hopefully recruit new students for future car projects.
Key Messages Covered: What engineering students at the University of Tulsa do, and how engineering can be used to help the environment by using new technology.
Any measurable results: Prospective students are aware of hybrid technology.
Photos:



Amanda Emnett discusses the modifications made to Isabella during the Challenge X competition.



The high school visitors were amazed that students just a few years older than themselves had accomplished so much.

C. Education Program – 5 points

Please use the chart to provide a list of all of your education outreach activities since the last competition. This list should include events as well as materials produced to assist in educating. Also provide a written description below with additional details for activity listed. Please number your events below.

Activity	Date	Location	Audience	Participants <i>(Briefly describe which team members participated)</i>
Brownie Day	8 March 2008	Keplinger Hall	Brownies	Melissa Young, Andrew Harmon, Mari Riera

1. Community event name: Brownie Day Date/Time: 8 March 2008, 9am-2pm
Location: Keplinger Hall, University of Tulsa Campus
Team participants: Melissa Young, Andrew Harmon, and Mari Riera
Audience: Brownie Girl Scouts
Activity description/details: The young girls learned about the different ways of powering vehicles through demonstrations including a NOX vehicle.
Key Messages Covered: The importance of different fuels for the future of cars.
Any measurable results: More young girls are interested in science, and will hopefully be future engineers.
Photos:



Challenge X teammates Melissa and Andrew get enthusiastic response from the Brownies as they explore ways cars work today and may work tomorrow.

D. Social Marketing – 5 points

Please list all updates or modifications to your team's website since last competition, including:

- Some new features to the website are the Spanish mirror allowing outreach opportunities to the non-English speaking community, a hit counter, and the site is now in PHP format for easier viewing, and faster loading.
- The website features a new Splash page, a dropdown Menu Bar, and new pages and information regarding frequently asked questions, Subteams, and Isabelle's Blog.
- Some special features on the website re the survey page which allows the team to access information and use it for consumer acceptability issues, and a link to the team's YouTube Video blog.
- Please include at least one screen grab of your team website below



A new banner has been made to be hung during outreach events and brochures have been made giving information about the project and the team's vehicle to be handed out during events as well. The brochures feature a section on "How you can improve your fuel efficiency today" as well as information about the team's vehicle.



The University of Tulsa

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New Challenge X Display Banner

E. Wrap-up – 3 points

The University of Tulsa has very knowledgeable team members that are able to explain the importance of sustainable mobility to everyday people without slipping into engineering jargon. The design implemented by the team is similar, but the special features found in the car are not found in the other team's vehicles. The University of Tulsa has been working hard to get a semester's worth of Outreach Events in 1 month to make up for the time when the vehicle was not operating due to various mechanical component problems. The University of Tulsa's marketing plan has made people in the Tulsa Community more aware of what "going Green" means, and the different hybrid technologies available today, as well as what hybrid means for the future. The changes in the plan utilizing TV and Print allowed a larger community, other than engineering professionals, and students to learn about Challenge X and the environment.

Budget: New banner: \$50
500 Brochures: \$400
T-shirt giveaways for those who play our video games at events \$500
Team shirts \$607

Note: Judges will have 2 discretionary points to use for the overall quality of your report.

Reported by: Mari Riera

Date: 7 May 2008

Appendix: Copies of Media Clips

StudentNews

Coleman Recognized for Process Design

RECENT GRADUATE TAYLOR COLEMAN (BS '07) won honorable mention for his solution to the problem presented for the 2007 American Institute of Chemical Engineers (AIChE) National Student Design Competition.

The Jonesboro, Louisiana native was one of seven chemical engineering students last spring who accepted the challenge during the plant design course taught by professors Keith Wisecarver and Frank Manning. Six students formed two teams while Coleman competed as an individual.

The AIChE competition required students to design a process to recover pyridine and 3-methylpyridine from waste streams. The design had to reduce waste disposal costs and be self-funding within three years.

"Students have 30 days to complete the design and may not speak to anyone about the problem during that time," Manning said. "Coleman exercised extremely good judgment by immediately seeing the best solution to the problem and wisely spending his time on that."

Manning said that, unlike most homework assignments, the AIChE design challenge does not include all the information required to solve the problem. This requires students to think creatively, do extensive research, and be discerning enough not to take the wrong direction.

Coleman said the real challenge was making a viable design that reduces costs and is self-funded within three years. "You can build a plant to do anything. The question is whether or not it is economically feasible," he said.

Today, Coleman is a technical service process engineer for Sunoco, Inc. in Tulsa. He said that the AIChE design competition was a crash course in practical engineering, giving him a view of how a design is impacted by many factors.

"Even in industry, one person seldom has to consider economics, process design, pure theory, environmental, safety, and logistical aspects as they design one project," Coleman said. "This project allowed me to see how all those have to work together."

Only 14 students nationally entered the design competition as individuals, with one winner and two honorable mentions.

"I am very proud of him," Manning said. "He worked hard to put himself through school, and this is a gold star for him."



Challenge X team members Scott Rainwater, Andrew Harmon, Kyle Hanneman, Zach Jones, Joshua Buck, and Amanda Emmett with faculty sponsor Christi Patton Luks, applied associate professor of chemical engineering.

TU Wins Award at Challenge X 2007

THE UNIVERSITY OF TULSA HAS WON THE National Instruments Most Innovative Use of Graphical System Design Award at the third annual Challenge X: Crossover to Sustainable Mobility competition.

The graphical, or controls, system was used to program the computers of the team's re-engineered 2005 Chevrolet Equinox for the four-year Challenge X engineering competition, sponsored by DOE and General Motors. TU is one of only 17 universities invited to compete in the prestigious national engineering program.

"There is no doubt that what I have learned from this project will have applications in many other projects in the years to come," said Scott Rainwater, a junior electrical engineering student and the leader of the controls system group that won the National Instruments award. He said his work on the project has taught him a lot about hybrid vehicle design and given him firsthand experience in what it takes to control one.

TU's award-winning controls system used National Instruments' software to program and monitor the team's hybrid auto design. TU's crossover SUV used a combination of technologies to increase its fuel efficiency by more than 10 miles per gallon: a diesel engine, fueled by biodiesel, and an electric motor, run by a high voltage rechargeable battery pack with hydrogen fuel cells.

This year's competition, which took place May 30 to June 7 in Detroit, Michigan, challenged students to develop

real-world methods for reducing vehicle emissions and increasing fuel efficiency.

"As one of only two private universities participating in Challenge X, TU uses students from a broad base of majors, and that's what gives us our edge," said Christi Patton Luks, TU Challenge X team sponsor and applied associate professor of chemical engineering. "We know that diversifying our team and getting different perspectives on approaching a problem can generate amazing results."

The 2007 TU team consisted of 23 mechanical engineering majors, 18 chemical engineering majors, 9 electrical engineering majors, 3 computer science majors, 2 physics majors, a math major, a music major, an English major, and a management major.

National Instruments, which sponsors the Graphical System Design Award, recognized TU for its innovative use of computer technology with application software and hardware in its vehicle designs to create sophisticated measurement, control, simulation, prototyping, and testing applications.

National Instruments judges teams based on their design philosophy and control strategy, implementation of virtual instrumentation solutions, the strategies they used to overcome challenges encountered during implementation, and schematic diagrams of the National Instruments products in the vehicle.

Computer Science Grad Named Tau Beta Pi Fellow

TAU BETA PI, THE NATIONAL ENGINEERING honor society, recently recognized Pavel (Paul) Gershteyn, a computer science graduate student, as one of its 37 graduate fellows for 2007. He was the only computer science student chosen from the 208 applicants.

The fellowships are granted based on scholarship, campus leadership and service, and the promise of future contributions to the engineering profession.

"I was privileged to support Paul's nomination for

the Tau Beta Pi Fellowship," said Roger Wainwright, professor and chair of mathematical and computer sciences. "Paul is a highly motivated researcher who is deeply devoted to service."

A Goldwater Scholar as well, the Colorado Springs, Colorado native earned his bachelor's degree in computer science in May 2007 and served as the secretary of the TU Tau Beta Pi chapter as well as a founder and secretary of TU's Jewish student society, the Hillel Club. He is also

a member of Phi Eta Sigma and Phi Kappa Phi honor societies.

"It's a great honor to have been granted this fellowship, and I hope that it will grant me a measure of credibility when I begin my professional career," Gershteyn said.

Tau Beta Pi was founded at Lehigh University in 1885 and has chapters at 232 engineering colleges across the United States. With some half-million members, it is the largest engineering society in the world.

