CM Cares Reaches New Heights

“What these students have done is above and beyond what they are required to do,” said Tom Bell, project manager at ISEC, Inc., the main industry sponsor of the James and Libby project in the CM Cares program. “As an alumnus of CSU’s CM program, it’s an honor to work with these students and for this initiative.”

Standing in the mud, watching an 80-ton crane lift a wheelchair swing into place, it is very apparent that these students are fully invested in their project. What started as improvements to increase backyard accessibility and mobility around the house for James and Libby, 11-year-old twins with Cerebral Palsy, has expanded to include not only the state-of-the-art wheelchair swing but a raised sandbox, automatic doors, and specialized bathroom amenities. “It’s amazing what this group of students has done for our family,” said the twins’ mother, Katie Waechter. “It’s a new level of freedom that they’ll get to have. A big ‘thank you’ to the CM Cares group for giving our kids this piece of independence.”

Amazing is a perfect descriptor for the sight of the giant crane parked on the quiet residential street outside the twins’ home. “We constructed the swing in the Industrial Sciences Lab at CSU with the help of Mike O’Reilly, the Structures professor,” said Kyle Snow, the project’s student leader. “GE Johnson Construction donated the use of the crane for the day so that we could put it in place, and we thank them for their support.”

Excitement was painted on the twins’ faces as they sat on their new deck and watched the swing settle gently onto its supports before being cemented into the ground. “It’s gonna be fun,” said Libby. “They built this for us and it’s just exciting.” When asked by a local news reporter if she thought the swing would mean her friends would want to play at her house all the time, Libby’s response was a big smile and a confident, “Yes.”

The James and Libby project is one of three projects underway during the Spring 2013 semester in the CM Cares program. The AJ Project involves home modifications for a nine-year-old boy with limited mobility, and the Brinks Project includes bedroom and backyard modifications to the home of a teenage boy with autism. All three were completed at the end of the semester and concluded with project presentations by the student groups on May 15.

Further details on all the projects will be available in the upcoming CM Newsletter due out later this summer.
Courses in higher education are constantly adapting to meet the ever-changing needs of business and society. Innovations in the classroom that incorporate new technologies or new methods of thinking to advance students’ understanding of the world around them are especially valuable. Two faculty members in the CM program were recognized for innovations such as these at the Celebrate! Colorado State University awards ceremony on May 7.

In 2011, under the umbrella of the CM Cares initiative, Caroline Clevenger and Mehmet Ozbek developed a service-learning course focused on sustainable design and construction while engaging at-risk youth and the community through a hands-on service project. The course, Leadership of Sustainable Community Projects, empowers CSU students to be leaders and mentors while managing a real-world project from conception to completion.

The course utilizes Universal Design for Learning, or UDL, principles which involve the development of a learning environment in which ideas and concepts are represented in multiple ways, students express their comprehension and mastery of the subject matter, and multiple opportunities for engagement are available to students. “Learning through leadership and engagement defines every aspect of this course,” said Clevenger, “from applying sustainability principles, to university students teaching others, to providing typically marginalized teenagers multiple opportunities for success.”

Through implementation of a teach/build/learn course structure, CSU graduate students collaborate with high school students on the construction of small scale, sustainable projects that benefit members of the local community. In spring 2011, the class built two sustainable doghouses for the Rocky Mountain Great Dane Rescue. The project for 2012 involved 12 xylophone music stands, two of which are handicap accessible, for Bennett Elementary School in Fort Collins. “The experience of executing sustainable building practices provided a wide range of students – elementary through graduate school – multiple opportunities for learning and mastery of material,” said Ozbek.

The groundbreaking concepts integrated into this course led to the nomination of Clevenger and Ozbek for the Provost’s N. Preston Davis Award for Instructional Innovation, which the two accepted on May 7. This award recognizes technology-related innovation and is named for a faculty member of CSU who retired in 1992 after more than four decades of service and whose many contributions focused on the creative use of technology to advance the teaching and learning goals of the University.

Clevenger and Ozbek also received The Institute for Learning and Teaching’s 2013 Exceptional Instructional Innovation in Service-Learning award which recognizes faculty members for demonstrating innovative contributions to service-learning curriculum development and/or community outreach. “It was exciting and an honor to receive these two awards,” said Clevenger. “Teaching the service-learning class has been a great highlight, second only to teaching with Mehmet, who is a pleasure to work with.”

“This is a ‘feel good’ class for everyone who is involved: faculty members, all levels of students, and the community partner,” said Ozbek. “That is why nobody involved in this class hesitates to put in more time than what the ‘rules,’ catalog descriptions, credit requirements, or even job descriptions say; we all just enjoy it to a great extent.”

Lessons in Construction for Kids

A handful of CM staff and students volunteered to help with AIA Colorado North’s Box City event at the Youth Activity Center in Fort Collins on April 27. The event promotes understanding of design and construction as children build structures in a cardboard city. They learn how to pull permits, design the facilities, order materials, construct the buildings, and lay out the city. “This was my first time helping with this event,” said faculty member Rodolfo Valdes-Vasquez. “It was a great experience for me helping the children to understand the construction process. Working with the kids was so enjoyable; they were really creative and focused on their tasks.”
CMAA Club Works to ‘Improve Student Experience’

“It has been a busy semester for the CMAA student chapter at CSU!” said Silas Dwyer, secretary for the group named for the Construction Management Association of America. As one of eleven student organizations in the CM program, CMAA’s members work hard to broaden the academic experience of CSU students through educational activities including site tours and guest lectures.

On April 8, the chapter organized a construction site tour of the 90,000 square foot retail store for Cabela’s in Thornton. The tour, hosted by Saunders Construction’s Mark Riedel, included the indoor archery range, the gun storage area, the employee lounge, and the back warehouse area of the building. Students engaged with Riedel on topics including the special concrete flooring utilized throughout the building and its associated impacts on the schedule, as well as safety considerations of the project. “Site tours like this allow us to improve the student experience by establishing the link between students and the construction industry,” said Dwyer.

CMAA also establishes this link between students and industry by hosting distinguished guest speakers each year. On April 23, Ron Evans, vice president and director of construction management at MWH Constructors, accepted the chapter’s invitation to speak at CSU. With over 40 years of experience in the construction industry, Evans presented on how his perseverance and hard work, while maintaining firm dedication to his family and future, lead to his successful career. He shared stories about the projects on which he worked and the successes and challenges of each, including some difficult tests of ethical integrity. At the conclusion of the evening, several students ranging from Pre-construction management to graduates remained to chat with Evans who was pleased to share more stories and advice.

Overall, the CMAA student leadership feels that the semester’s events proved beneficial to students in the CM program. “Our chapter has earned a well-deserved reputation for professionalism, teamwork, and organization,” said Dwyer. “Students can look forward to seeing similar events organized by our group in the near future!”

Research Group Presents at Engineering Sustainability Conference

Thanks to travel grants earned through the National Science Foundation, faculty member Rodolfo Valdes-Vasquez and his research group of CM graduate students Anderson Lewis and Allison Smith travelled to Pittsburgh, Pa., to attend the 2013 Engineering Sustainability Conference in early April. While in attendance, the group presented on their research topics which included the implications of using low-VOC products in building operations, the perception of Colorado property managers on educating low-income housing tenants about energy efficiency, and a series of processes for evaluating infrastructure projects for social sustainability.

Valdes-Vasquez’s group also participated in a short symposium prior to the opening of the conference that was led by Annie Pierce of Virginia Tech. “We ’speed dated’ with other researchers looking for collaborative opportunities,” said Smith. “At the conference, I made connections that will further my thesis research and future career.”

The conference, held every other year, brings together engineers and scientists from academia, government, and industry to share ideas and results of cutting-edge research aimed at developing environmentally sustainable buildings and infrastructure. “The knowledge, inspiration and contacts gained from this conference will most certainly have a positive impact on my future research,” said Lewis. “I would like to thank the CM department at CSU as well as the NSF for making this conference a reality for me.”
Senior Presents CM Cares Poster at Showcase

CSU is very proud to recognize the research and creative achievements of students throughout the year and hosts various opportunities for students to present their work. The culminating event is the Celebrate Undergraduate Research and Creativity showcase held each spring. This year, Tom Morgan, a senior in the CM program, submitted and presented a poster about the CM Cares projects underway during the spring 2013 semester.

Morgan was enrolled in the Construction Leadership course and therefore participated as a leader of one of the three projects. His immersion in the service-learning aspect of the course and the CM Cares program fostered the inspiration and the subject matter necessary to create his poster. Morgan noted in his poster’s abstract that, “The projects are fully fundraised and managed by the students in the class. This exposes the students to unforeseen problems and issues and makes them step outside their comfort zone. This immersion in the project management role creates an environment where students must embrace diversity by working in teams along with industry professionals. These challenges help the students learn both from successes and failures throughout the projects.”

Morgan’s poster earned an honorable mention in the service-learning category.

USGBC Hosts Green Building Panel

The U.S. Green Building Council student group hosted a panel discussion on May 3 focused on building greener communities. Panel presenters included US Congressman Jared Polis, Fort Collins Chief Sustainability Officer Bruce Hendee, CSU Chief Facilities Engineer Carol Dollard, and Jeff Lyng, a senior policy analyst at the Center for the New Energy Economy located at CSU. The group focused on maximizing renewable energy, promoting innovation and development of green building, streamlining construction processes, and creating green jobs in Colorado. Over 70 people attended the discussion, including CSU students and local citizens.

Students Tour Mason Corridor Project

As Fort Collins residents know, based on various road closures and detours over the course of the past year, the MAX bus rapid transit system project is underway along the Mason Corridor. All the associated construction and development phases right in CSU’s backyard provide prime opportunities for CM students to get out into the field and observe an urban transit project firsthand.

Students in the Construction Equipment and Methods class toured portions of the project on April 30. CSU civil engineering alumnus Keith Meyer hosted the tour, which began with a short presentation at the construction office. Students were then taken to see a bridge under construction over Mail Creek as well as one of the rapid transit stations along the route.

“Field trips such as this add significant value to this course,” said John Wooten, a CM senior. “Seeing the actual thing and talking with construction personnel involved on a particular project teaches us what can’t be learned from a textbook. It also benefits us in that we are exposed to the environment in which we will one day be working.”