## Letter From the President

Dear Students, Alumni and Faculty,

I am pleased to present the Winter 2012 edition of the ASCE Bruin. The purpose of this newsletter is to give you a general overview of our accomplishments over the past quarter. We have had a very busy quarter and it was my pleasure to watch many new officers and members grow and contribute to our organization.

This year began with another large transition into the newest addition to Boelter Hall, the Student Creativity Center. The Student Creativity Center is located on the second floor of Boelter and has five large laboratories for student organizations. We were lucky to secure one of these laboratories for the next two years. There are several restrictions on the type of work that is allowed in the laboratories and the CEE department has been gracious enough to help secure time and space in several of the curriculum workspaces. This has been a large adjustment, but our project executive and our project managers have handled the situation with patience, making the most of the situation.

Winter quarter brings our larger career fair, on February 5, and our projects begin to focus on the upcoming regional conference. The 2013 Pacific Southwest Regional Conference will be cohosted by University of Southern California and Loyola Marymount University and is scheduled for April 3rd. Our seismic design and geotechnical teams are also planning on attending the EERI and Geo-Institute national conferences.

I would like to now thank the faculty and our practitioner advisor for their ongoing support and belief in this club and our purpose in the Civil Department. I would especially like to thank our faculty advisor, Dr. Gaurav Sant, our new Department Chair, Dr. Jonathan Stewart and Practitioner Advisor, Dr. Bill Goodin. In addition I would like to thank all of our project sponsors for generously providing funding and materials necessary for us to attend conference and perform to a competitive level every year. We are also fortunate to have so many sponsors that not only provide financial support, but also hold career development workshops, which help our members become confident, professional engineers.

If you have any questions or would like to become more involved please feel free to email me at mollymeertens@gmail.com.

Sincerely,
Molly Meertens
Career Fair- *By Ryan Vanderlip*

The annual ASCE Fall Career Exposition took place on Tuesday, November 13th this quarter in the Kerckhoff Grand Salon. Over one hundred students came out to network with industry representatives during the 3 hour long event. Six large organizations representing construction, structural design, and civil design were on campus that day, including ASCE’s Gold Sponsors for the 2012-2013 academic school year: W. E. O’Neil Construction, Shimmick Construction, and the United States Army Corps of Engineers.

Several of the attending firms conducted first round interviews in the following weeks for both internships and full time positions. Looking forward, ASCE will be hosting its primary Career Fair of the year on February 5th, 2013 in the Ackerman Grand Ballroom. Fifteen organizations and companies have already confirmed attendance at the writing of this article and more are expected. As an ASCE member, or alumni if your company is interested in recruiting top engineering talent from UCLA, please do not hesitate to contact me at vanderlip.ryan@gmail for more information, or with questions.

![Sponsors](image)

Professional Outreach- *By Ryan Vanderlip*

During Fall Quarter, ASCE held a series of infosessions with its sponsors to allow younger members to learn more about specific companies and industries while also allowing upperclassmen the opportunity to seek internships and full time jobs. ASCE individually held infosessions for Shimmick Construction and Turner Construction, but also collaborated with other student groups on campus including SWE and TBP to host additional infosessions for AECOM and Accenture.

ASCE also organized a public speaking and presentations workshop with our perennial sponsor and partner, W. E. O’Neil Construction. This event is part of a yearly professional development series WEO has been hosting with ASCE for the last few years. Students are given the opportunity to hone their presentation skills in an interactive workshop given by WEO representatives.
Athletics- By Robert Ebert

ASCE was proud to host two intramural teams in fall quarter, a coed volleyball team and men’s flag football team. For many students, team sports are a great way to build relationships with their piers and get to know each other outside of their classrooms. While the sport teams were an opportunity for students to come together, have fun, and get to know one another, they also allowed students to showcase their competitiveness and get ready for upcoming conference challenges. Our coed volleyball team, The Netty Professors, came ready to give it their all at every game. After a rough start, the team began putting the pieces together late in the season but unfortunately was eliminated from playoff contention in their final game.

Out on the field, our football team, Running Back Pains, came out strong with great participation from undergraduate ASCE members of every year. The team was balanced with a mix of younger members and upper class men, and their high powered offense propelled them deep into the playoffs. Several freshman who played were excited to get involved with ASCE projects and learning more about the profession of civil engineering after meeting the older guys, which means this season was a resounding success. In the semifinals, Running Back Pains lost a hard fought battle and the season came to a close, but every member of the team was proud of their effort and ready for the challenges awaiting them next quarter.
**Mentorship- By Samara Al-Jumaily**

These past few months, ASCE has hosted all-Civil mentorship events throughout the quarter as part of the larger MentorSEAS program. The program, now in its second year, links new students to returning students who can offer academic and extracurricular advice and support. Mentors are each assigned 1-4 mentees and are encouraged to contact them through email or telephone with any tips or tricks they may have, as well as interacting with mentees at our events.

We hosted three events this quarter: ASCE Open House, a class planning workshop, and a gingerbread house social. The Open House was held in Boelter Penthouse at the start of the quarter. ASCE officers as well as all major Project Managers were there to introduce their projects to new students and answer questions about getting involved during the school year. The class planning workshop was held mid-quarter, just in time for winter quarter enrollment times to begin. Jan Labuda, director of the Office of Academic and Student Affairs, presented about academic advising and class planning for the future, while upperclassmen advised new students on optimizing their class schedules. Finally, ASCE hosted a gingerbread house social, where students let off some pre-finals steam by getting creative with candy and frosting.

In the future, we are looking to organize final week survival kits and have mentors deliver them to their mentees in the residence halls, as well as an all-Civil paintballing trip, including interested graduate students and even some faculty members.
PROJECTS

Congratulations to all the projects on their funding presentations for the Engineering Alumni Association (EAA)!

CONCRETE CANOE – By Sam Delwiche

For our theme this year, we have chosen to channel the spirit of old time cartographers with our theme: “Meridian”. This theme will draw upon traditional mapmaking styles to create an ornate and timeless stained design. Just as sailors used the meridian as part of their navigation, we will use this theme to guide the spirit of this project.

The concrete canoe project this year has been working hard to be innovative and successful. During the fall, we developed and refined our concrete mix. Our goal was to create a concrete mix that is as strong as last year’s mix but also much lighter. We started with a series of tests for admixtures and aggregates, and developed a concrete mix that is not only as strong as last year, but is significantly lighter. We also discovered a basalt fiber reinforcement system that essentially doubles the concrete’s initial strength.

For the winter quarter, we have a lot of work to do still. We have begun cutting foam blocks that will become our molds for the canoe this year. We will cut out cross-section canoe shapes into each block, and coat and finish both the male and female mold. When the molds are finished we will cast the canoe. After curing, we will de-mold the canoe and begin sanding and finishing. Once the canoe is smooth and polished we will stain our designs. We will also be building other things, such as display stands, and canoe cart, and a table top display.
STEEL BRIDGE – By Daniel La Franchi

The Steel Bridge Team worked hard this quarter designing the bridge and gathering all the materials required to build the bridge. The rules were released in late August and our team meticulously read and understood the rules which helped facilitate and expedite the design process. We came up with a few design prototypes early on in the quarter and worked with Professor Sabol to work out any caveats we encountered along the way. We finally finalized the design around 9th week of Fall quarter (11/28/12) but still need to work out a few technical issues we have run into regarding connections, including the fabrication and ordering of connections.

Fall quarter we also worked on buying all the tools and parts required for the project including enough wood to build a jig as our work table. We finished building the jig 10th week of Fall quarter (12/7/12) which will hopefully set us up for a fluid fabrication of the bridge. So by the end of Fall quarter we were able to complete the design, set up our workspace, gather/buy all of our tools, and acquired all the steel needed to build the bridge this year.

For winter quarter we plan to have all the pieces of steel cut early in the quarter which will allow for plenty of time to weld the bridge. We plan to have two involved welders this year to weld the bridge. All of the directors will be highly involved with cutting the steel and grinding/angling the pieces. The bridge this year, overall, has a more complex design than our bridge from last year so we will need all the involvement we can get from directors and freshman and sophomores interested in the project. Looking forward to the completion of the bridge and eventually competition!
SURVEYING – By Thuy Nguyen

This year the ASCE Surveying project is focusing on upgrading our equipment and increasing our knowledge in all areas of surveying. Since the use of a non-reflectorless total station was required during competition last year, we anticipate its reappearance. Fall quarter preparations included acquiring calibrated equipments, and providing the surveying team with basic principles and techniques.

Next quarter the surveying team plans on training and practicing all possible courses that could show up at competition. We will start with leveling so watch out for practice days to be announced soon. Come out and join the team that will give hands-on experience to prepare for the EIT and PE exams!

ENVIRONMENTAL DESIGN – By Casey Claborn

This year’s environmental design team has enjoyed a fun and productive Fall Quarter. Our work will continue into the winter as we finalize our design and begin prototype optimization and project construction. We hope to claim the ever-elusive victory at LMU/USC this spring. The team is always looking for new members, so if you would like to meet new people and learn more about environmental engineering, email Casey Claborn at cvcclaborn@gmail.com.

CONCRETE SPORTS – By Vivek Manickam

This quarter, the Concrete Sports project has focused on planning various parts of the project. We have developed a schedule and a list of goals we want accomplished next quarter. Along the way, we had a social to practice with last year’s concrete bowling ball. This year, we don’t want to make the same mistake of bowling a "0" score! We will start building the bowling ball and horseshoes once the official rules are released. For now, we have drafted ideas for the design that need to be tested next quarter.
SEISMIC DESIGN – By Emily Yagi

This fall quarter the Seismic Design Project has accomplished a few major tasks. The first few weeks of the quarter we brainstormed possible design ideas including possible damping mechanisms and structural improvements on last year’s design. We were able to collaborate with a few professors, faculty, and graduate students during this process. As a hands-on activity we were able to test two different bracing systems (chevron and cross bracing) on the shake table and learned how it worked and see the accompanying results. Around mid quarter, our team submitted a design proposal highlighting our structure’s functionality, quality, and context. These aspects included creativity, suitability, sustainability, cost-efficiency, and innovation. Around 38 schools are registered, and UCLA was approved to compete in the competition that will be held in Seattle, Washington from February 12-15, 2013. Finally towards the end of the quarter, we began construction of our 1 foot prototype as well as the structure that will be used for competition.

As for winter quarter, our plans consist of the majority of construction. This is includes attaching the structure to our base plate and fabricating all structural components as well as the facade members. Construction is completed, we will perform an analysis to provide acceleration and displacement response predictions. Also, our team will create a poster display of our balsa wood model and prepare for the presentation that will be given at competition. Finally, we will make final arrangements for a road trip to Seattle where our team will learn, compete, and enjoy the competition.
GEOTECHNICAL DESIGN – *By Robert Ebert*

The GeoWall project is currently on schedule and is ready to continue progress in winter quarter. After advertising the project at ASCE’s open house and the Engineering Welcome day, there were many students who expressed interest in the project. Workdays were held on Wednesday evenings, and between 6 to 8 people came to every workday including several freshmen. Fall quarter workdays were dedicated to the testing of the soil and reinforcing materials. At the first workday, I explained the principles behind mechanically stabilized earth walls to the new students with the help of last year’s project manager Sean Ahdi. Then throughout the quarter we performed several tests to help us design the wall and write the design report we will be submitting to compete in the national GeoWall competition. These tests included compaction tests to determine the maximum density the sand can achieve.

![Compaction Test with Vibratory Effort](image)

Winter quarter workdays will be used to practice wall construction and testing the design of our reinforcement. With practice, we hope to optimize the design weight of our wall and represent UCLA at the regional and national competitions with great success.