

Cal Poly Wins ASC Student Competition with Assemble

CAL POLY

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ABOUT THE UNIVERSITY

University Name:

California Polytechnic State University
(Cal Poly)

Location:

San Luis Obispo, CA

Competition Name:

29th Annual Associated Schools of
Construction (ASC) Region 6 and 7

Award Won:

First Place in Virtual Design and
Construction

“ We love how fluid and user friendly Assemble is. We were able to create an accurate project estimate in less than two hours to win the competition. ”

CM Students, Cal Poly

CAL POLY CONSTRUCTION MANAGEMENT STUDENTS WIN VIRTUAL DESIGN AND CONSTRUCTION CATEGORY BY SOLVING REAL-LIFE PROBLEMS

INTRODUCTION

California Polytech University, often referred to as Cal Poly, is the second largest land-holding university in California. The Construction Management Department at Cal Poly is a tight knit group of faculty and staff working to provide the students the best possible education by encouraging the adoption of innovative technology solutions and hands-on learning. Cal Poly joined the Assemble Academic Program in the fall of 2015, to expose the students to the leading BIM data management solution used by top General Contractors in the industry.

The Associated Schools of Construction (ASC) supports both National and Regional Student Competitions. Each year regional competitions are held in various locations across the United States. Teams can compete in one of 12 categories which focus on different aspects of the industry. Award criteria includes estimating, bidding, planning, scheduling, presentation skills, creativity, understanding of sound construction techniques and thoughtful methodologies.

THE COMPETITION

The 29th Annual Associated Schools of Construction (ASC) Region 6 and 7 competition challenges teams of six students to solve real-life construction management problems in nine categories. Each team is given 14 hours to create and present deliverables to a panel of industry experts. There are multiple deliverables including estimating and scheduling. The competition drew 181 teams from 46 universities.

THE CHALLENGE

For the Virtual Design and Construction category, the competing teams were presented with a 10-story office building with one story below grade basement in the San Francisco Bay area. For the estimating deliverable, the teams were asked to estimate the square footage of the interior partitions as well as determine the total square footage of the glazing for exterior cladding.

The scheduling deliverable focused on determining quantities for specific elements and then applying productivity rate given to establish the time frame. The students had to calculate task durations to mobilize and install raised access floors, in floor 7 through 10, and steel framing for the entire

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building.

THE SOLUTION

The Cal Poly published the Revit model to Assemble and used the filtering and visibility options to isolate the interior partitions. The team further viewed the results by levels to create a more detailed estimate. Additionally, Cal Poly used Assemble's color override feature to create graphics showing the different zone types as well as isolate and create additional graphical representations of the curtain walls which was one of the deliverables. The CM team was able to pull together a full estimate in less than 2 hours.

To address the scheduling problem, the Cal Poly utilized visibility settings and color coding to isolate worksets, floors and building components to get the relevant quantities to calculate the durations of the tasks. In a matter of minutes, the team isolated the steel framing and access flooring component and applied the productivity rate to come up with the schedule duration. Due to the graphical nature of the software, the team used Assemble to create visual representation of the scheduled component to show which elements were taken into account when creating the schedule.

THE RESULT

The Virtual Design and Construction category was an internationally open competition that allowed all ASC member institutions to compete. Despite the heavy competition, the Cal Poly Construction Management Students won first place in the Virtual Design and Construction category based on the accuracy of their estimates and schedules. The students received additional recognition from the judges for going above and beyond what was required in their final presentation.

Cal Poly is no stranger to the ASC competition, the students have performed consistently well over the years winning various categories. However, in 2016 the Cal Poly construction management students dominated the competition and brought home 6 trophies – including four first-place wins in the Heavy-Civil, Virtual Design and Construction, Pre-construction Services, and Electrical Systems categories. Cal Poly placed second in Concrete Solutions and third in Mechanical Systems.



Team Pic: (Standing L to R) Brian Spurgeon (alternate), Nick Nam (alternate), Trey Garcia, Trevor Houghton, Elbert Speidel A.I.A (Faculty Advisor), Matthew Susank (Advisor)
(Seated L to R) Cordelia Sam, Marco Maffioli (Co-Captain), Dhakshan Potuhera (Captain), Kristi Kusa