

Chevron Engineering Week Competition at USC

National Engineering Week is intended to celebrate how current engineers make a difference in the world we live in today as well as to make all of us aware of the increasing need for professionals dedicated to this important discipline. During E-Week, Chevron partnered with USC to host a student design competition in which current engineering students could implement their knowledge in solving relevant engineering problems designed by experts in the field. Carrying from last years' competition, students had the option to solve either a petroleum or chemical engineering question. Petroleum engineering teams faced the challenge of preparing and presenting two surface and subsurface oil retrieving design concepts for a heavy crude oil field. The chemical engineering teams were faced with the task of explaining the causes of instability of pressure within a distillation column.



Figure 1 Chemical Engineering Team Winners

This competition welcomed 6 petroleum engineering and 3 chemical engineering teams that consisted of 7 students each (undergraduate and graduate level) from the USC Viterbi School of Engineering. Not only was each team judged on their understanding of the problem, creativity in proposed solution, research

about currently available technologies, quality of presentation, and a Q & A session, but also on the behavioral challenge of working as a team. Our panel of judges included Margarita Hernandez, Brian Thigpen, Nathan Vrubel (all participated remotely from Chevron in Houston), and participating from USC was Cynthia Murphy (Chevron), Mike Hauser, Vega Sankur, Dr. Noah Malmstadt, and Dr. Malancha Gupta.



Figure 2 Petroleum Engineering Team Winners

After careful deliberation, our judges chose Team G consisting of Ahmed Bubshait (Team Captain), Mahshad Samnejad, Rayan Dabloul, Marjan Sherafati, Abdulrahman Bubshait, Magdalene Ante, Devang Dasani as winners for the petroleum engineering design question. Respectively for the chemical engineering design question, Team D consisting of John Atyeo, Stephanie Ego, Jay Paek, Brett Perry (Team Captain), Nathaniel Reardon, Justin So, Xinnan Jackie Xu won first place. "The Chevron competition provided a great opportunity for us to tackle an open ended, real world, design problem and we value the resulting development of our research, collaboration, and presentation skills", said Brett Perry.