

Dr. Larry Baxter, G20

BYU Chemical Engineering

IRA A. FULTON COLLEGE OF ENGINEERING

YEAR IN REVIEW

MESSAGE FROM THE CHAIR



Dear Friends and Associates,

We are currently teaching classes at BYU in several ways:

- In-person with safe spacing between seats
- Blended, where students are only in-person once a week and online twice per week
- Live online
- Recorded online.

We are teaching small labs in person, but the Unit Ops labs had students come the first week to see the equipment followed by online only where they are given actual lab data. We have gone through periods where 20-30% of our students had to self-isolate because of exposure or contraction of the COVID-19 virus. WE are trying our best to help students learn in the best way possible under the pandemic circumstances.

I am so blessed to work in the Chemical Engineering Department at BYU. The joy of this job is to see students learn difficult principles and succeed. Another joy is to see our alumni succeed both in the workplace but also in the Gospel of Jesus Christ and their families. I hope that you are thankful for the tithes of the Church members that made your BYU experience possible, and that you represent them well.

Sincerely,
Thomas Fletcher
Professor and Chair of Chemical Engineering

NEW FACULTY

Devin Rappleye joined the Chemical Engineering Department in June 2020 as an assistant professor. He is setting up a research laboratory focused on molten salt electrochemical sensors and processes. Previously, he was a chemical engineer in the Chemical Processing of Nuclear group at Lawrence Livermore National Laboratory (LLNL). Prior to working at LLNL, Devin received his Ph.D. in Metallurgical Engineering at the University of Utah and M.S. in Nuclear Engineering at North Carolina State University. He and his wife meet while he was working on his B.S. in Chemical Engineering at BYU. She has been key to his success. They are the proud parents of 5 kids.



2019-2020 ChE HIGHLIGHTS

- 52% of students got internships
- 25% of students were co-authors on papers
- 87% of students participated in research
- 8% of students did a study abroad
- 98 BYU ChE Alumni
- 16th ranked best college for Chemical Engineering
- 524 Current Undergraduates
- 43 PhD Students
- 18 MS Students
- 17 Faculty
- 8 Staff

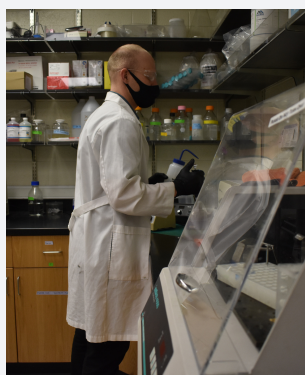
RESEARCH HIGHLIGHTS

BILL PITT

Dr. Pitt's lab is working on separating bacteria from blood to identify specific infections for faster treatment. They have decreased the time this process takes from 1-2 days to 30 minutes.

ANDREW FRY

In Dr. Fry's lab students are working on a new pressurized combustor and gasifier in ERL.



CCC IN SAUDI ARABIA

Cryogenic Carbon Capture™ (CCC) is a climate change mitigation technology based on concepts from a BYU faculty member. Sustainable Energy Solutions (SES) has been commercializing and scaling the technology for over a decade and has been working with several international organizations and governments, including the King Abdullah University of Science and Technology (KAUST) in Saudi Arabia. KAUST organized an on-campus technology summit for in-country dignitaries that featured the CCC process.

Michael Staker

CLUB HIGHLIGHTS

BYU WINNERS AT AICHE REGIONAL CONFERENCE

- 1st Place ChemE Jeopardy: AB Gutman, Becky Fuller, Jason Guymon, Joel Howarth
- 2nd Place ChemE Car Poster: AB Gutman, Zachary Jacobs, Adam Hawkins, Brady Zeller, Robert Steagal
- 2nd Place ChemE Car: AB Gutman, Zachary Jacobs, Adam Hawkins, Brady Zeller, Robert Steagal
- 1st Place Paper Competition: Landon Ebbert, working with Dr. Bundy
- 3rd Place Paper Competition: Isaac Wheeler, working with Dr. Lignell



Landon Ebbert

DEPARTMENT HIGHLIGHTS



MIKE BELIVEAU RECEIVES 30 YEAR SERVICE AWARD

Mike Beliveau received his 30-year service award. We are so grateful to Mike for his long and devoted service. I am sorry that we could not get together to celebrate. Please congratulate him when you see him, or send him a note.

DEPARTMENT & COLLEGE AWARDS

- Brad Bundy received Karl G. Maeser Excellence in Teaching and became a Full Professor
- Morris Argyle received Outstanding Faculty and 1-year Research Development Fellowship
- Tommy Knotts received Special Recognition
- Andrew Fry was voted Most Influential Faculty by ChE seniors
- Randy Lewis received 1-year College Fellowship
- David Lignell received Christensen Professorship and became a Full Professor
- Matt Memmott earned CFS

ADDITIONAL AWARDS

- Morris Argyle received Fellow of AICHE
- John Hedengren Distinguished Lecturer from Society of Petroleum of Engineering
- Tom Fletcher received Fellow of the Combustion Institute
- Larry Baxter received Izatt-Christensen Outstanding ChE Faculty Award

2019 GRADUATING CLASS

