Engineering @McLennan

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What's Happening

It has been another successful year for McLennan's engineering program, and we have lots of exciting things to report in this year's newsletter. Our students accomplished some very impressive feats. We were particularly excited with the collaboration we had with Caterpillar, where a group of six interdisciplinary engineering students worked on a real-world project to improve safety and efficiency on a manufacturing line.

Several engineering students graduated with highest honors (that means a 4.0 GPA!), and our most recent group of graduates are transferring to universities across the state. To make this process even easier, recent changes at the state level made specific engineering, math, and science classes eligible for guaranteed transfer to public institutions across Texas. (Read more in the side bar!)

We also traveled back to the United Kingdom, this time adding Ireland to our itinerary, and wrote a new installment of our travel guide, When Nerds Travel in Packs: Dublin, Edinburgh, and Bletchley Park which is available on Amazon. Additionally, the program welcomed Professor Laura Wright to our faculty. She brings excellent industry and educational experience that will benefit our students.

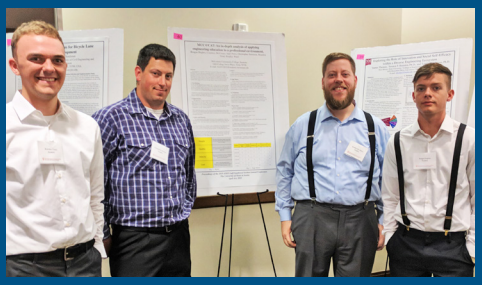
Guaranteed Transfer

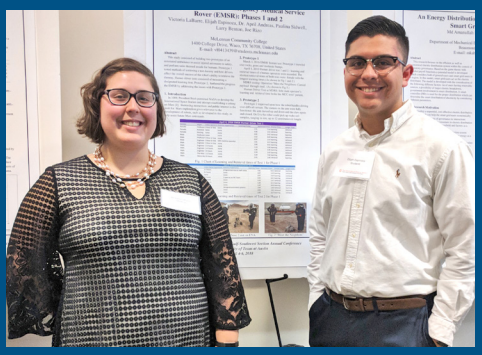
Starting in Fall 2018, all public universities in Texas offering engineering programs must allow specific community college engineering courses to transfer. This means that once you are accepted into an engineering program in mechanical, civil, electrical, or chemical engineering, the university has to apply certain classes to the degree.

To put it in another way, if you earn a C or better in specific engineering, math, and physics courses (including the tough ones like dynamics, circuits, and differential equations), and you're pursuing one of the degree plans that require them at a Texas public institution, then your courses are legally protected and have to transfer. Woot!

Links to all the relevant laws, codes, etc., are available at www.mclennan.edu/engineering-department/guaranteed-transfer.

Eyes on Baylor? No worries! Although Baylor isn't covered by the state law, we have an agreement with them to help maximize the transferability of your courses. Ask an MCC engineering advisor for details.





Students Recognized at Engineering Conference

This year, eight MCC engineering students submitted research posters to the American Society for Engineering Education (ASEE) Regional Conference, a three-day conference held in Austin including a research poster competition. Students from all over the southern United States competed, almost exclusively college seniors and graduate students. MCC was the only community college represented at the competition.

Not surprising to anyone who knows our students, MCC came in first and third place! Third place was awarded to our Caterpillar Research team: Reagan Hughes, Aldo Perez, Brad Ward, Courtney McCreary, Chris Sorensen, and Brandon Trout. First place went to Victoria LaBarre and Elijah Espinoza, who presented their work on a medical robot that they designed and built the previous year as part of Mars 101. Our students received high compliments on the content of their research and their excellent presentation skills. We are quite thrilled that our students were able to get the recognition they deserve!

New Faculty Spotlight

Laura Wright is joining the faculty this year as an Assistant Professor in Engineering. Professor Wright earned her B. S. in Physics from University of Texas at Dallas and her M. S. in Physics from Colorado State University. While at Colorado State, she worked as a teaching assistant in physics and astronomy, while also conducting research in the field of AMO (atomic, molecular, optical) physics. To make a very long story short, she pointed lasers at atoms to see what would happen.

While in graduate school, Professor Wright quickly realized she had a passion for education. She has over eight years of experience teaching physics, astronomy, and biology in Houston and Austin, and after moving to Waco, taught all math and science courses for the DAEP in China Spring. In addition to holding formal teaching positions, she has experience with a hodgepodge of educational projects. While at UTD, she helped launch a Women in Physics chapter for the school and helped design and lead a summer science camp for preteen girls to inspire them to pursue careers in STEM. In 2010, she was awarded a fellowship through the University of Houston to lead a group of high school students to build detectors for the ALICE experiment at CERN. Most recently, she helped lead a Girls Who Code club at the Hewitt Public Library.

This semester, Professor Wright is teaching the Introduction to Engineering classes, Digital Systems, and College Physics I. We are absolutely thrilled to have her join our department!

International Travel

Prof. Sidwell, Dr. Andreas, and Prof. D traveled with a group of eight engineering economics students and five research students to the British Isles, making stops in London, Bletchley Park, Oxford, Edinburgh, and Glasgow. The students particularly enjoyed a tour of the London Underground, visiting the Renault Sport Formula 1 factory, going up The Shard in London for graduation, and visiting Bletchley Park, home of the World War II codebreakers. This year, we added Dublin to our itinerary, where the students learned about how Dublin has become the Silicon Valley of Europe, toured Trinity College, and visited the historic jail Kilmainham Gaol. Students once again wrote chapters that will be published into our third issue of our travel guide, When Nerds Travel in Packs, which is available on Amazon.

Where Are They Now?

J.W. Balch (CE, Texas Tech, 2018) is working for an engineering company called Westwood Professional Services based in San Antonio in the residential land development department doing hydrology, and site grading and drainage.

Mark Berry (B.S in CE, UT Arlington, 2015; M.Engr. in CE, UT Arlington, 2017) is working for a local consulting engineering firm in Austin Texas with plans to pursue a Ph.D. in Civil Engineering at the University of Texas at Austin to study computational environmental fluid dynamics.

Kyle Flaherty (EE, Texas A&M, 2018) moved to Florida to work as a government contractor as a test engineer and will soon start an MS in Telecommunications Engineering.

Zak Fyke (CS, Texas Tech, 2018) is working on his thesis for a master's degree in Computer Science, with a research focus on Data analytics and Machine Learning as it applies to security. He just completed a summer internship at Noblis in San Antonio, working on Geo-spatial Data Visualization and Analysis tools. He enjoys the company of a four-month-old Husky named Atlas and two cats.

John Gibson (CE, Texas A&M, 2015) is working at CDS Muery in San Antonio as a site developer for local schools and residential subdivisions, and is working toward his PE certification. The family chickens joined them in the move.

Saphal KC (ChemE, Texas Tech, 2015) is working in Minneapolis as Principle Quality Engineer at Medtronic. There are lot of challenges everyday but he is absolutely loving his new job.

Jacob Lockhart (MET, Tarleton, 2017) recently landed a position with Klein Tools in product design and development.

Eric McLean (ME, Texas Tech, 2018) scored an awesome job in Georgia.

Bao Pham (IE, UT Arlington, 2017) keeps himself calm by calculating angular momentum during otherwise stressful situations. "Engineering is a tough and arduous profession, but I'm getting by."

Adam Steiner (EE, UT Dallas, 2015) started an awesome rotation program at work where he'll be moving to different engineering positions on different programs for the next 2.5 years, and then get to pick his favorite! He and his wife Jody bought a house in Tucson, and love hiking and exploring Arizona.

Jessica Unger (ME, Texas Tech, 2018) was excited to celebrate her graduation with a trip to Disney World. Unfortunately, the party invitations to her former MCC professors were lost in the mail!

Eskindir Abebe (EE, Texas Tech) worked at Texas Instruments this summer as a product engineer in Dallas.

Johnathan Beechner (CS, Texas A&M) was recently selected to work on a special open-source Mars Virtual Reality project based on his work at MCC with the Mars 101 program.

Ragan Forrest (ME, St. Mary's University) is keeping busy as a baseball player (conference champions!) and completed a summer internship at Catamount Constructors, a general contractor group in San Antonio.

Jaxom Hartman (EE, Texas Tech) is enjoying a sweet co-op program and is gearing up for graduate school.

Karen Rucker (EE, Texas Tech) was named to the list of top Researchers, Writers & Influencers Covering Astronomy and Space Exploration (https://bit.ly/2sfnIxf). She completed internships with the NASA Kennedy Space Center and Lockheed Martin Aeronautics this year and spoke onstage at the 34th Space Symposium in April.

Karen Sanchez (CE, Texas Tech) worked at TXDOT this summer. "It's been awesome seeing the things I've learned in school and using them in real life practice!" She can't wait for graduation!

Pete Silva (ME, Texas Tech) is thrilled to have successfully completed Systems and Vibrations and absolutely loves Materials Science!

Jared Wolfe (IE, Texas Tech) landed a great summer internship at a government contractor working on customer return manufacturing and looks forward to graduating next May.

Jesus Carreon (ME, UT Dallas)

Victoria Labarre (EE, UT Arlington

Kristen Petree (CE, UT Arlington)

Vince Porcare (EE, Texas Tech)

Esteban Ramirez (BioE, Texas A&M)

Garreth Ruggles (ME, Texas Tech

Garrett Rust (ME, Texas Tech)

Arwhil St. Thomas (ChemE, Texas Tech

Brad Ward (CompE, Texas Tech)

Tim Wright (ME, UT Arlington)

Key

ME	Mechanical Engineering
EE	Electrical Engineering
CE	Civil Engineering
CompE	Computer Engineering
ChemE	Chemical Engineering
CS	Computer Science
MS	Master of Science
Ph.D.	Doctor of Philosophy
PE	Professional Engineer

Alumni Spotlight

James Grisham is an aerospace engineer at Blue Origin. He joined Blue in June 2017 after earning a Ph.D. in Aerospace Engineering from the University of Texas at Arlington. His graduate research focused on high speed aerodynamics. He spends his days working on a variety of tasks related to New Glenn, ranging from aerodynamics to six degree of freedom integrated simulation and other flight dynamics-related analyses. When he isn't working, James usually spends time with his wife and their black lab, or is out running or hiking in the beautiful Pacific Northwest. James' advice to current MCC students, "Do everything you can to master the fundamentals you learn in your first few years of engineering. Specifically, I'm thinking of the material you learn in calculus-based physics, statics, and dynamics. I use the fundamentals that are taught in those classes on a daily basis in my job."

Student Spotlight

Kristen Petree attended MCC right out of high school with initial plans to pursue mathematics but was quickly fascinated by engineering. A Presidential Scholar and member of the Engineering and Physics Club, Kristen enjoyed the diversity of opportunities at MCC, participating twice in Scholar Day, traveling with MCC Engineering to the United Kingdom (twice!), and volunteering regularly. A particular highlight? Being selected to introduce Justice Clarence Thomas to the MCC student body when he visited in September 2017. Kristen says, "Due to the experience and skills I gained with MCC's engineering department, I was able to confidently transfer to the University of Texas at Arlington where I am continuing to study civil engineering. I want to encourage current students to keep their ears open for the events and opportunities presented to them by the engineering professors. Those experiences won't just enhance your resume, but strengthen your skills as a student, leader, and team member!" We are so excited for Kristen and wish her the best of luck.