

INGENIUM

Chemical Engineering • Civil Engineering • Electrical Engineering • Mechanical Engineering



Benedictine College School of Engineering Newsletter
Volume 10. Issue 1, Summer 2026

A Message from the Chair

Dr. Patrick O'Malley

Greetings from the School of Engineering! I'm very excited to share some of the developments we've had this year. Equipment from our \$1M grant has continued to roll in – a distillation column for the chemical engineers; upgrades to the soil and environmental labs to expand our testing capabilities in Civil; RF Power meter, differential probes, and current probes for the EE lab; many upgrades in the shop including CNC mill, CNC lathe, CNC plasma torch, CNC laser cutter, CNC brake press, and many more. We faculty are all very excited about putting all of these tools in the hands of our students to continue to deliver a high-quality education for our students.



In the past year, we had a 100% first time pass rate in Spring 2025 and 95% in Fall 2025. While we don't get official Spring 2026 numbers until July, it looks like we will be above 90% again. The first-time pass rate across all ABET schools is typically around 70% and that this is a required exam for us and we consistently get such high pass rates speaks to the quality of our programs.

As you'll read in this issue, we are excited to bring on several new faculty members. Prof. Wes Moore joins our Civil Faculty and brings significant experience in the Transportation field, in addition to prior teaching experience. Also joining us in the fall is Dr. Richard LeBoeuf who will teach in the Mechanical Engineering program. He has extensive teaching experience at many different types of institutions and most recently has been working in support of the planned NASA lunar missions. We currently have a search going on in Electrical Engineering and hopefully by the time you are reading this article, we will be fully staffed in all disciplines.

One new change we are implementing this coming year is adding a new role to further support our students in academic advising and student success. All students will still be assigned a regular faculty advisor, but now Prof. Charlene Smith will be an additional resource for students by providing additional advising support, managing our tutoring program, and expanding the services we are able to offer for student success initiatives. She'll also take on various other tasks including editing the newsletter, helping with social media and still teaching occasional courses.

A significant curricular change will also be rolling out in Fall 2026 which is that in order to take ENGR-1200 Intro to Engineering, students will have to place into Calculus I to ensure they have sufficient math preparation to succeed. To help those who start off in Precalculus, we will begin offering a spring-semester Intro to Engineering course as well as our typical fall sections. We hope this change will provide a better onramp for those who need math skills reinforced before fully launching into the program.

This year, we will be working hard to prepare for our upcoming ABET accreditation visit. These visits occur every 6 years and our last visit occurred in 2021 when we received first-time accreditation for our EE program. Our "Self-Study Report" is due next summer, and the on-site visit will likely be in September 2027.



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Faculty families have seen some growth this year. Prof. Bujana and his wife Kasey welcomed their daughter Antoinette Marie at the end of September. Dr. Ledoux and her husband Mel welcomed their son Everett on May 4. Jenn and I will welcome a new O'Malley in mid-June. Praise God for new life!

A couple requests of our alumni and friends: We're always looking for additional companies to come to our career expos in the fall and spring to recruit our students for full-time work, internships, or co-ops. Please consider coming back to campus for these events or encouraging your company to send someone. The expos have grown each year, and I would love to continue that trend. Secondly, we'd love to have you come back to campus for a lunch and learn with our students about what you are doing at work as they continue to discern their interests. Ideally, this would be in-person but we have also done these remotely by video call so don't let the distance be a deterrent! Please reach out to me if you are interested in either of these opportunities.

Lastly, we're eagerly anticipating the opening of the new library this fall on campus. I've been on several tours as the construction progressed and having this space will be a huge benefit to our students (and faculty too – I can't wait to get in the reading room myself!).

Thanks for reading this issue, I hope you enjoy the stories and updates from Westerman. Please continue to pray for the success of our school, the faculty, and our students. I always look forward to seeing our alums back on campus...if you are visiting, please be sure to stop by!

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Richard LeBoeuf Joins ME Faculty

By Richard LeBoeuf

Dr. Richard LeBoeuf will join Benedictine College this fall as an Assistant Professor in Mechanical Engineering.

Richard earned Bachelor of Science degrees in Mechanical and Electrical Engineering and a Ph.D. in Mechanical Engineering in his hometown from the State University of New York at Buffalo. His graduate research involved the study of jet engine fluid flow, which paved the way to a post-doctoral fellowship at Stanford University's Center for Turbulence Research. He automated measurements of turbulent flows in a small wind tunnel at NASA Ames Research Center. On the path to Benedictine College, Richard worked in both teaching and industry. Along the way, he also earned a Master of Business Administration degree from the University of Maryland and Project Management Professional and Agile Certified Practitioner certifications.

He has taught in mechanical and electrical engineering, engineering technology, and management programs. He was the founding director of the first Master of Engineering Management program in Chile, South America, where he lived for over five years. In industry, he developed rocket simulation tools for NASA's mission assurance program and was the navigation, guidance, and controls lead for the NASA THEMIS mission, which investigated the cause of northern lights. Most recently, he has been supporting NASA's lunar missions with surface navigation analysis.

Richard is married to Claudia LeBoeuf, a published science fiction writer, and has six children: Richard Jr., Rosemary, Jennifer (Sr. Renée), Robert (Benedictine College Mechanical and Electrical Engineering class of 2027), Thomas, and Margaret. He likes to spend time with his family writing poetry, renovating houses, hiking, and singing traditional liturgical music. Richard looks forward to helping students learn how to glorify God through their work.



LeBoeuf Family



Wes Moore Joins CivE Faculty

By Wes Moore

Wes Moore joined the Civil Engineering faculty in January of 2026 after serving as an adjunct professor the previous semester. His prior experience includes 23 years with the Missouri Department of Transportation, 5 years as an assistant professor at Missouri Western State University, and recent experience in consulting engineering and program management for the Kansas Department of Transportation.



Wes Moore with his wife, Janet

Wes' other work experiences include being a radio and teletypewriter operator, communications-electronics officer, high school math and science teacher, tax preparer, and farm laborer. In addition, he has built three of the houses his family lived in. Having tried an A-frame, a gable, and a gambrel roof, he hopes to use a clerestory roof on his next project.

Wes and his wife, Janet, have been married for 38 years and have seven children and nine grandchildren. Six of their children were homeschooled, and the youngest will graduate with a Civil Engineering degree this May, transitioning them into a new phase of parenting. Their other children include two chemists, two homemakers, a French teacher, and a river barge deckhand. Their children's spouses include an IT specialist, an accountant, and a doctor of osteopathic medicine. Apparently, being born in 1991 is a requirement to marry into the family.

Wes and Janet enjoy traveling and have been able to spend time in France visiting with their son-in-law's family as well as several trips to Ukraine completing an international adoption. Family ties are too strong to leave home for longer than a visit, though.

Outside of teaching, Wes enjoys construction, gardening, fermenting sauerbraten, helping his parents on their farm in Missouri, and playing board games with his family. His professional interests include highway program project prioritization and practical design. The common thread is problem solving, and he welcomes students to stop by his office with their problems—though if they are homework problems, the Socratic method will be applied!



ASCE Student Chapter Hosts Kansas Student Banquet

By Sophia Caughron

On Tuesday, March 31, 2026, more than 70 engineering students, faculty, and professionals gathered at Benedictine College to celebrate the American Society of Civil Engineers (ASCE) with a dinner banquet. The event was held in the McAllister Boardroom, where guests enjoyed views from the fourth-floor balcony overlooking the Amelia Earhart Bridge and the newly installed cupola atop the library.

Attendees included students and professors from KU and K-State, as well as practicing engineering professionals. The evening also marked a special return visit from Professor Berry, who retired in 2023, and even President Minnis stopped by to join the celebration.

A key part of the program was the presentation of ASCE awards, recognizing outstanding contributions within the engineering community. The evening featured a presentation by engineers Dana Brumley and Zac Smith on the Panasonic battery plant in De Soto, Kansas. With a project cost exceeding half a trillion dollars, the scale of the development captured the audience's attention. Dana explained how the surge in business driven by construction activity has contributed to increased local



Students Socialize with Presenter Before Banquet

revenue, helping to reduce property taxes for residents of De Soto. Reflecting on the event, one presenter remarked that "the future of our profession is in great hands," underscoring how the banquet highlighted the strength and promise of the next generation of engineers.

Career Fairs Bring in Alumni from 15 Companies

By Dr. Charles Sprouse

Our engineering career expos are designed to allow students and company representatives to get to know one



Dr. Sprouse with Alumni Recruiters at Spring Career Fair



another, so companies can find the best candidates for engineering internships and full-time engineering positions. There are other important benefits, however. Engineering expos are venues for students to develop their ability to present themselves professionally (in dress/attire, spoken interactions, and in writing/resumes). The events also provide ample opportunities to learn, due to the wide range of engineering projects tackled by the attending companies. Hearing what different working engineers do helps students envision the different industries they may want to focus on in their own careers. There are also real networking benefits, where the personal connections made at the expo events can lead to collaborative opportunities in the future. Companies that compete on one project may work together on another project, and the more networking students can do here in college will only benefit them in the future. This year, Benedictine was blessed to welcome alumni from fifteen different companies. Personally, I feel a lot of gratitude and joy when our graduates come back to extend a helping hand towards our current students. They are great examples of caring engineering professionals.

Company representatives tend to find our students to be especially grounded, well-spoken, and knowledgeable. They are also complementary of the event, which has to do with the excellent job Jennifer Dittemore (Career Services) does with

organization, scheduling, location, and furnishings, but is also largely attributable to the quality of students we have.

New Shop Equipment

By Scott Kuefler & Maria Clarke

Following the reception of its \$1M grant from the 2024 federal budget, the School of Engineering has experienced a great influx of new equipment throughout the department, particularly in the shop. Some highlights include:

The HAAS TL-2 lathe is a new and welcome

addition, which replaced the old large manual 16"/24" swing 10' long 198G

Southbend lathe that was modified to be CNC. The TL-2 is a 2-axis manual & CNC lathe that is mostly

enclosed with cutting coolant capabilities. Its versatile and modern safety features make it a good fit for our engineering students to create prototypes of their designs. Although it was only just powered on and put into service, Kaden Austin (ME student) was already able to machine a pin for his junior design project using the manual machining capabilities.



Kaden Austin with HAAS TL-2 Lathe





Fagor Retrofit

The ShopSabre Plasma Table with a Hypertherm 85 Sync power supply and cutting torch has been used non-stop this Spring semester. The junior and senior design students were able to learn and cut their own designs from 1/2" plate steel with little difficulty, a task previously outsourced to companies outside of Atchison. The CNC plasma table has the same user interface and control scheme as the ShopSabre CNC wood router and fits seamlessly into the shop. Students have already benefited greatly from this addition. Senior Maria Clarke comments, "The new plasma table was a game changer for the Mad Mixer Senior Design team. Our team cut almost 2 full 4ft x 8ft sheets of 16GA steel on the plasma table. Without this tool, we would have had to outsource this step because of the lack of precision and accuracy with hand-cut parts. The CNC table ensured that all parts were the exact dimensions of the CAD models, saving hours of machining, welding, and rework time."

The Ingersoll Rand Quiet Air Compressor is

a standard and reliable reciprocating style compressor with a modern enclosure package. It has been paired with an air dryer unit and filters that will ensure that clean-dry air is supplied to the shop and engineering laboratories throughout Westerman for years to come. This unit was a necessary upgrade to the age, noise, and small size and capacity of the previous air compressor, especially with the extra air consumption of the new CNC Plasma Table.

The HAAS Mini Mill is the newest milling addition to the shop. This machine was purchased as an upgrade from the Fagor, which is a manual mill that a CNC package was added to. This is a 3-axis mill with a 10-pocket tool changer, 6000RPM spindle and a 10HP motor. It also has a chip auger and coolant system to clean out the metal that is removed from the machined part.

Two Grizzly 20" Variable Speed, 1HP Tapping Drill Presses were purchased to aid in machining. The shop currently has a smaller 3/4HP Grizzly drill press and a large antique 1/2HP drill press that require manual adjustments to change speed. The variable speed and higher power motors make these new machines more versatile and user-friendly.

The shop also purchased a JET Horizontal Variable Speed Bandsaw. This bandsaw is a major upgrade from the Turn-Pro band saw, which had manual speed



adjustments, a 1HP motor, and a regular cutting capacity of 7 x 12 in. The JET bandsaw has a 1.5 HP motor, variable speed, band rotation to cut mitered edges, and a rectangular cutting capacity of 9 x 16 in.

One final noteworthy item is the retrofit of the current Fagor CNC Vertical Mill. Our workhorse converted Fagor CNC Vertical Mill was retrofitted to have a table mounted enclosure and a minimum quantity lubricant system (MQL). This new setup allows the mill to utilize its strengths of being a flexible teaching machine for aluminum and mild steel. The MQL system is a cleaner and healthier system for the students and allows more visibility of the machining process for learning. More challenging-to-machine materials will be moved to the new HAAS Mini Mill such as stainless steel. By moving away from the homemade enclosure and flood coolant on the Fagor CNC, it will now have a new future role in the shop for student projects for both manual and CNC machining.

Concrete Canoe

By Samuel Gagnon

For the second year in a row, the Benedictine College Concrete Canoe Team placed fourth in the concrete canoe competition at the 2026 Mid-America Student Symposium, hosted by Southern Illinois University of Carbondale

and the American Society of Civil Engineers (ASCE). This year, the team, which consisted of students across various disciplines and majors, was led by its president, Paul Hanson, and vice-president, Mary Jo Guarino, with the goal of constructing Benedictine's lightest and most maneuverable canoe yet.

In honor of St. Patrick, the patron saint of engineers, the theme of the canoe was "Duck of the Irish" - a playful take on the classic rubber duck. Because of this, the team christened the canoe *Lacha*, which is Gaelic for "duck."

With this fun and original theme in mind, the aesthetics team, led by Zachary Leuer, decorated *Lacha* with a bright green skim coat. Besides the yellow ducks that border the outer hull of the canoe, ornate Celtic designs are incorporated throughout its interior, including crosses, knots, and shamrocks.

The mix design team, led by Samuel Gagnon, designed both the skim coat and structural mix of *Lacha*. Many improvements were made in the



Concrete Canoe Team with Lacha



structural mix, specifically reducing the weight of the mix while still retaining sufficient strength to withstand the forces of the paddlers. Some key changes from last year included incorporating lightweight aggregates, ground pumice, and a water-reducing admixture. After its construction, *Lacha* weighed approximately 400 pounds, which is a 20% reduction from last year's canoe, *Verso*.

Besides its lighter structural mix, *Lacha* also featured an improved hull design, which was spearheaded by Becca Madden. While inheriting features from last year for better strength and stability, the hull shape was optimized to reduce the weight of the canoe and increase its maneuverability. Specifically, the rockers on each end of the canoe were increased, and the overall vessel was narrowed. Joe Campbell, the head of logistics, played a key role in developing a reusable mold for the canoe featuring this improved shape.



Joe Campbell (Lt) and Sean Galloway (Rt) Ready to Race,
Assisted by Zachary Leuer (Standing)

These changes and the process behind the design and construction of *Lacha* were documented by Anna Leuer, who guided the report team. This report provides an extensive breakdown of the research, materials, and costs required to develop the canoe.

The team raced *Lacha* against 12 other schools, and placed second place in every single race, including the men's and women's slaloms, men's and women's sprints, and co-ed sprint. Several of *Lacha*'s paddlers commented on how easy it was to steer, thanks to the new hull shape from the hull design team. Despite the high winds and strain from the races, *Lacha* remained unscathed, a true testament to the hard work put into her design and manufacturing.

Besides the canoe races, the team also competed in other areas at the symposium. Sophomore engineering students Gabriel Menke, Mary Jo Guarino, Samuel Gagnon, and Zachary Leuer placed fifth out of twelve in the 1st and 2nd Year Mystery Design Challenge, where competitors were tasked with constructing a structure out of noodles, marshmallows, and tape. Gabriel also led the concrete bowling ball team and created two bowling balls themed after dragons. These were used in actual bowling games against other schools and strength tested. Finally, Sean Galloway, the administrative captain of the team, presented the team's



symposium paper, co-authored with Samuel Gagnon. He discussed the role of civil engineers in addressing the cultural and socioeconomic needs of the public.

Overall, the team was very excited to compete in the competition with *Lacha*, which they are very proud of. They are looking forward to next year and cannot wait to compete at the 2027 symposium, which will be co-hosted by Benedictine College and the University of Kansas.

Engineering Mission Trip

By Robert LeBoeuf

Over Spring Break, nine Benedictine College students, Fr. Brett Taira, and Deacon Patrick Hirl traveled to the Dominican Republic on the Engineering Mission Trip. Led by BLUE Missions, a group dedicated to ensuring clean water for people around the world, we built latrines for families in a mountain campo.

Our time from Sunday to Friday was divided well between prayer, work, integration with the community, and team development. After wake-up and coffee, we devoted each day to the service of Christ by making a Holy Hour with Benediction. The chapel was only a quarter mile walk down the gravel road from where we stayed. Our work during the day consisted of laying concrete foundations over prepared holes, assembling the latrine doors, cementing a



Engineers Building Latrines in Dominican Republic

toilet to the foundation, and building the structure with nails, wooden beams, and corrugated metal. Meals were generously provided by the locals. They included 'tostones' (fried plantains), fried cheese, and guayaba jam. During our free time, we had the opportunity to play with the local children and speak with them in what little Spanish we knew. We had some time to spend together just as a team, talking or playing makeshift baseball with sticks and pinecones. Fr. Brett celebrated Mass in Spanish every evening, which was very special for the people at the campo, to whom a priest could only come to minister to once a month. Our team was privileged to witness an Anointing of the Sick. We also got to visit a lady who was homebound from a leg infection who asked for us to pray a Rosary with her in Spanish.

During the mission trip, we lived simply and learned to be grateful for the many little blessings that God always gives us.



The only water the people had came from the rain they collected from their



Benedictine Engineers Hard at Work on Mission

roofs. As such, our only way of showering was using a bucket of water with a pitcher in a tent. The concrete for the foundations was mixed from rocks, sand, cement, and water out in the yard with a pickaxe and shovels. On one occasion, we needed to use rainwater from a puddle in the road to mix the concrete. We slept on simple cots under mosquito nets and used the BLUE Missions latrine next to the community center we stayed in. But we all experienced the joy of serving God, which no earthly comforts could replace. We also found this joy in the people of the campo. By disconnecting from our phones and schoolwork for the week, we could give our undivided attention to the priceless interactions we had with God, our team members, and the community.

During his sermon at the final Mass of the trip, Fr. Brett told us that both we and the townspeople showed each other love by upholding the dignity of the other. We had the privilege to raise their quality of life and provide these beloved children of God with the sacraments. But they were

also able to give us the warmest welcome and hospitality, providing us with food, lodging, and company out of the little that they had. With the grace of God, we will bring this experience back with us in extending that same spirit of simplicity, service, and self-sacrifice toward all those who need help in our daily lives.

Discovery Day

On Wednesday, April 15th, Benedictine hosted its 30th Annual Discovery Day. The day featured more than 75 presentations given by over 300 students. Of those presentations, 15 were sponsored by the School of Engineering. These presentations were given by students on topics ranging from traffic studies to autonomous delivery drones to ergonomic racing canoe pedestals. Other presentations included a 3D printed rocket, a soft plastic adhesive for fishing lures, a study on AI, and a study on using computer vision to allow computers to see and interact with the physical world. Finally, the day also featured the highly anticipated sumo bot competition,



James Fisher and Mark Schroder Present Their Project to Dr. Bujana

highlighting the work of the freshmen Mechanical Engineering students.



SWE & ASCE

Society of Women Engineers

SWE started this year with an introductory brunch. Throughout the year, SWE hosted many events. In the Fall, a resume building workshop was held to prepare students for the career fair and potential internship and job applications. In October, SWE helped Dr. Andrew Downs run different stations during Spooky Science. In the Spring, SWE held both a game night and a movie night, both aimed at building community amongst the engineering students.



SWE Beginning of the Year Brunch

One of the major contributions that the group made to the efforts of the SoE this year was through their work on the Atchison Christmas Parade float. The theme this year was *The Polar Express*. For this theme, a train engine with a smokestack was built. A fog machine was used to simulate the smoke from the stack. While walking in the parade, members of SWE dressed as the conductor, elves, and children to make the experience of the Polar Express come to life for all parade attendees. SWE enjoyed collaborating with the leadership of ASME, ASCE, and AIChE to make this vision come to life.

American Society of Civil Engineers



Student Organizations with Christmas Parade Float

This year, the ASCE student chapter stayed busy with a mix of professional events and team activities. The group attended the ASCE Regional Conference, where the chapter leaders met and connected with other students and professionals in the field, while hearing from experienced engineering leaders. They also hosted a lunch-and-learn with Paul Johnson, a Benedictine alum who gave students a chance to hear about his experience and career path as a structural engineer. ASCE also organized a study day to help members prepare for exams and support each other academically.

In March, the chapter hosted a joint banquet for Benedictine, KU, and K-State students in conjunction with the Kansas section of ASCE. This served as a networking event, where members had the chance to connect with peers from other schools. A presentation was also given by project leads on the new Panasonic battery plant in De Soto, KS. At the end of the banquet, a few ASCE members were recognized with section awards.



AIChE & ASME

One of the biggest highlights of this semester was the Concrete Canoe team. The team placed fourth overall at the conference and took second in every race. It was a great example of the teamwork and effort that the Benedictine Raven ASCE members put in all year. Overall, it was a fun and productive year for the chapter, with a good balance of learning, competition, and community.

American Institute of Chemical Engineers

This year, the Benedictine College student chapter of the American Institute of Chemical Engineers hosted a tour of the Futamura, Inc. cellophane plant in Tecumseh, Kansas. Two Benedictine Chemical Engineering alumni, Evan Southerland '18 and Anthony Olimpio '20, showed the group the entire process, beginning with the raw imported cellulose, continuing into the liquification of the material, and concluding with the



Annual Chemical Engineering Picnic

reactors that produce cellophane. The tour was a huge success, and everyone was very excited to see Chemical Engineering design principles in action.

American Society of Mechanical Engineers

The ASME student chapter started the year with a cookout and officer elections. Daniel Crossett was elected President,



Roman Becher Presenting to Crowded Room of ASME Students

Luke Swackhammer—Vice President, Sophia Kuyawa—Secretary, and Quinn Bailey—Treasurer.

During the Fall semester, the club helped with the float for the Atchison Christmas Parade. The float was themed around the Polar Express and the ASME chapter helped build the frame for the train.

In the Spring, the chapter hosted three guest speakers that covered a wide range of engineering-related topics. A presentation by **Roman Becher '25** (former club treasurer) discussed his work



SHP

in electrical transmission at Burns and McDonnell. Students were able to get a glimpse of the different options available for their future careers. The second guest speaker was Pedro Silhy, who discussed his work as a stress engineer for the corporate jet program at Dassault. The third and final presentation featured Benedictine's own Claire Fink, who discussed graphic design to help students with posters, presentations, and report layouts. Claire's talk was especially helpful for the Junior Design students working on their poster assignment.

Each lecture was well attended by more than 30 students and several faculty members. The broad range of Spring lunch lecture topics drew students from the other engineering disciplines, benefiting the entire School of Engineering.

The ASME Executive Board would like to thank Dr. John Rogers—Faculty Advisor, Kalen Wojtkun—24-25 President, and Janis McGregor—Administrative Assistant, for their help in making the student chapter successful this year, and we look forward to what we can accomplish next year.

Sleep in Heavenly Peace

It has been another fruitful year for Sleep in Heavenly Peace. The leadership team

was expanded this year to include a Vice President role, filled by John Kline, a junior Electrical Engineering major. This year, the organization hosted 6 bed builds, in addition to a few hosted by the chapter extension in St. Joseph, Missouri. For one of these builds, SHP was hosted by Holy Trinity Catholic Parish in Lenexa, Kansas, where they built 45 beds. In addition to the large bed builds, many students from Benedictine and members of the Atchison community volunteered to help build more bed components for deliveries. Thank you especially to the groups from St. Benedict's Catholic School, Maur Hill - Mount Academy, and the women from Memorial Hall who volunteered this year. 365 beds were built this academic year, contributing to the 1769 beds built since the chapter was founded in 2018.



Bed Build at Holy Trinity Catholic Parish

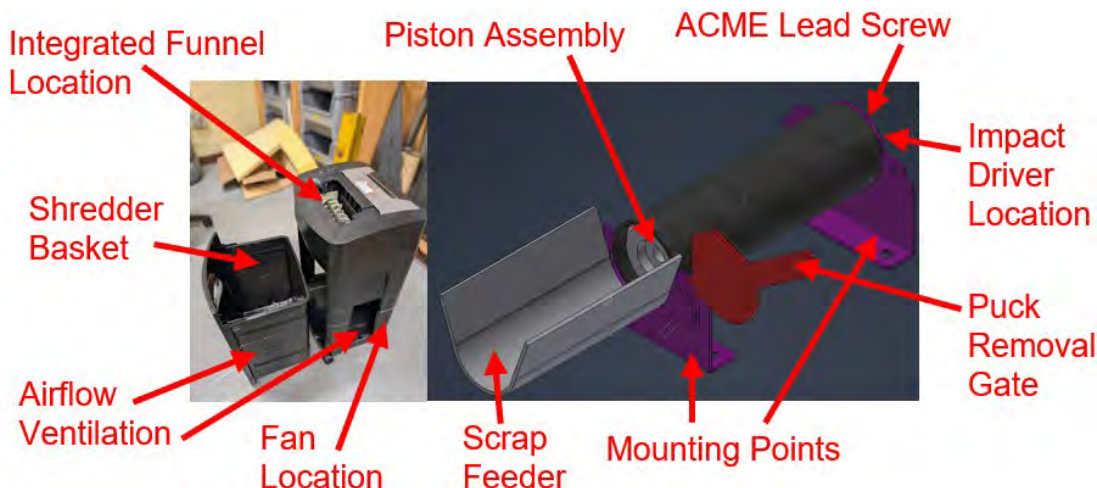


Mechanical Junior Design Projects

Mechanical Can Shredder and Crusher

Phil Butler, Brayden Harmon, Christian Kelly, Zachary Wilcox

Sponsor: Prof. Park

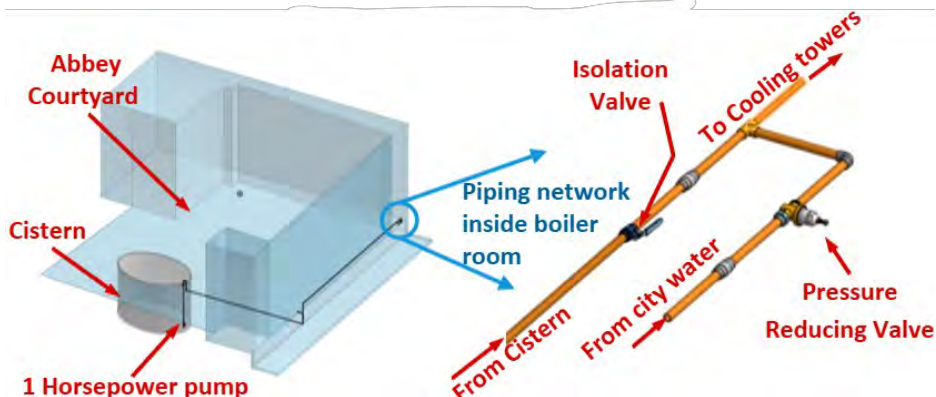


Waste aluminum cans are fed into the funnel of the shredding system. A cordless impact driver powers an ACME lead screw and piston assembly to generate axial compressive force, and the aluminum shreds are compacted into solid pucks suitable for melting and casting. A steel frame ensures structural rigidity, and an extraction gate enables easy disk removal.

Abbey Cistern Pump System

Nick Ackerman, Quinn Bailey, Edward Stephenson, Luke Swackhammer

Sponsor: Mr. Dwight Stephenson



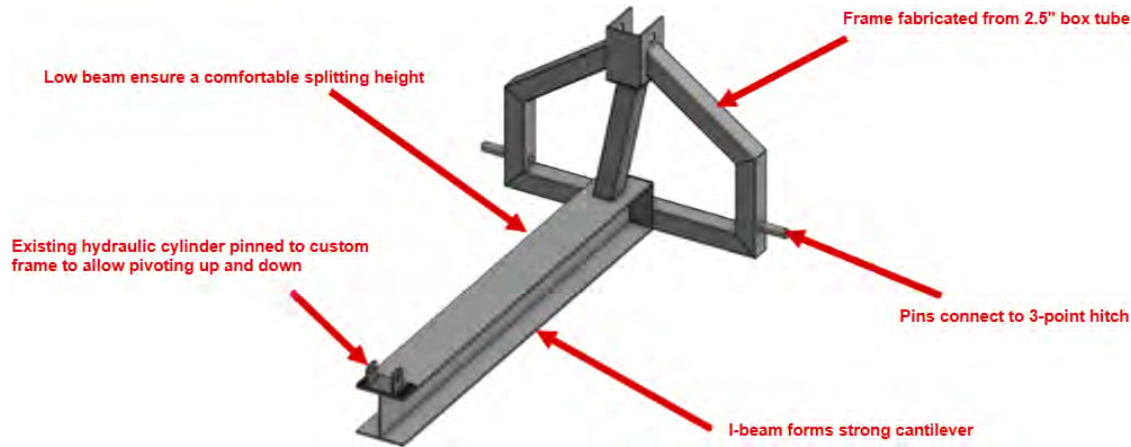
The team developed a plan to restore the 40,000-gallon rainwater cistern for the monks of St. Benedict's Abbey. They selected a suitable pump and designed a piping network with pressure relief valves and other water distribution devices. The cistern will be used to supply extra water for cooling towers and other non-potable purposes for the Abbey.



Mechanical Junior Design Projects

3-Point Mounted Log Splitter

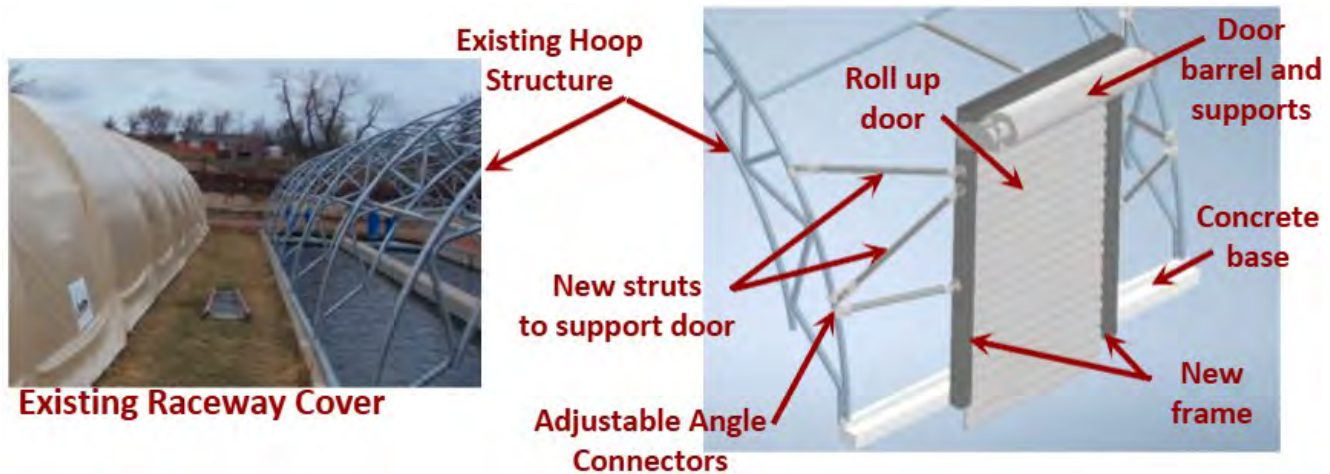
Daniel Crossett, Joseph Freitag, Nicholas Katze
Sponsor: Mr. Dave Neumann



The device converts a log splitter to a tractor's 3-point hitch for easier transportation. The design includes a custom steel frame, which fits the existing cylinder rail. Power is delivered from the tractor's hydraulic system, and a regenerative valve controls splitting speed. The splitter may be operated horizontally or vertically.

Fish Hatchery Raceway Roll-up Door

Kalli Hart, Cecilia Izquierdo, Katharine Stickney
Sponsor: Mike Barnes



The team designed the addition of a commercial overhead roll-up door to the side of a fish hatchery hoop structure. The aluminum door frame is mounted on a concrete footing and stabilized with steel pipe struts to the existing hoop structure. A marine grade vinyl cover (not pictured) will seal between the new door frame and the existing structure.

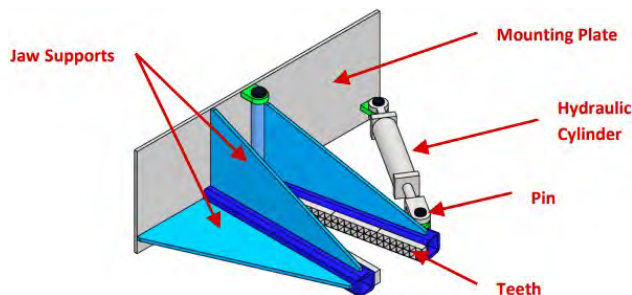


Mechanical Junior Design Projects

Hydraulic Sapling Puller

Kaden Austin, Jefferson Otter, Elliot Peters

Sponsor: Dr. Steinbach

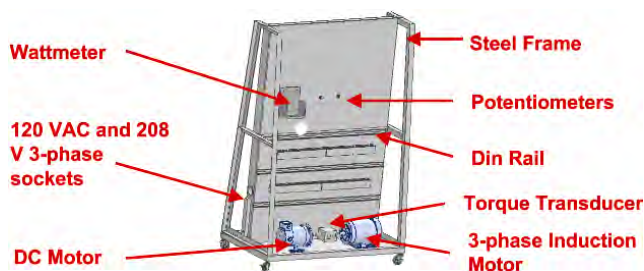


The hydraulic sapling puller is mountable to a Bobcat skid steer via a mounting plate and quick attach hydraulic lines. The teeth were manufactured to grip the base of a sapling better, reducing the required clamping force. One jaw is fixed perpendicular to the mounting plate, and the other jaw, driven by a hydraulic cylinder, closed to grip the sapling.

Electric Drives Motor Test Stand

Mason Charvat, John Dondlinger, Robert LeBoeuf, Peter Roth

Sponsor: Dr. Downs

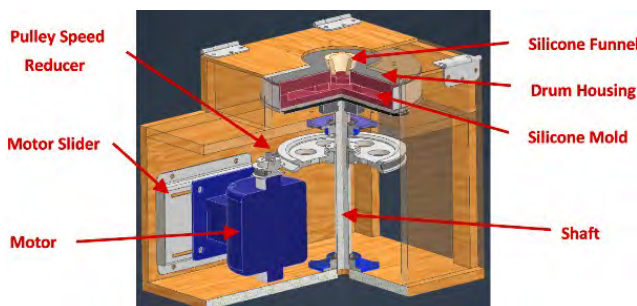


The team designed an Electric Drives test stand teaching aid. For visibility and ease of access, components are mounted on the vertical surface. Motors and transducer sit on the horizontal tray, and a plexiglass shield ensures safety. The stand is mounted on casters for mobility and is sized to fit through classroom

Centrifugal Casting Machine

Conner Galloway, Paul Hanson, Joseph McIlheran

Sponsor: Prof. Park



This metal casting machine employs centrifugal action for quality superior to gravity-fed designs. A motor spins a shaft and drum containing a silicone mold. Liquid metal is poured into the funnel and flows horizontally into the mold cavities. This machine will be used to cast Discovery Scholar medals and other products.



Chemical and Civil Capstone Projects

Bioethanol Production Process

Louis DeLellis, Kiera Russell, John Freitag

Fuel grade ethanol is an extremely common additive to motor gasoline used to produce cleaner burning fuels. With demand for cleaner fuels increasing, US fuel ethanol consumption is expected to grow by 3 billion lb/yr by 2030.

This project designed a process to produce fuel grade ethanol from corn. The process is technically feasible and uses conventional equipment. The process is economically feasible with a positive net present value (NPV) and a total capital investment of about \$110



Louis DeLellis, Kiera Russell, and John Freitag with Plant Layout

MM.

Saint Benedict's Abbey Road Reconstruction

Client: Saint Benedict's Abbey

Samantha Bertoncino, Sophia Caughron, Rory VanTrease

This project presents the conceptual design of roadway and drainage

improvements for Saint Benedict's Abbey in Atchison, Kansas. Existing site conditions are characterized by inefficient stormwater conveyance, localized ponding, and deterioration of the gravel roadway surface due to inadequate grading and lack of defined drainage infrastructure. The objective of the project is to improve overall site performance through a combination of grading modifications, hydraulic analysis, and roadway surface enhancements. For grading, the primary focus was incorporating sheet flow to create drainage patterns. Based on the hydraulic analysis, a culvert was designed to convey runoff across the roadway in the north area, while drainage improvements in the parking lot focus on maintenance of existing infrastructure. The project also includes upgrading the gravel roadway to a chip seal surface to improve durability and reduce maintenance. Overall, the design provides a practical and cost-effective solution for improving drainage and roadway performance.



Current Roadway Condition Following Rainfall



Electrical Capstone Projects

Pulse Pioneer

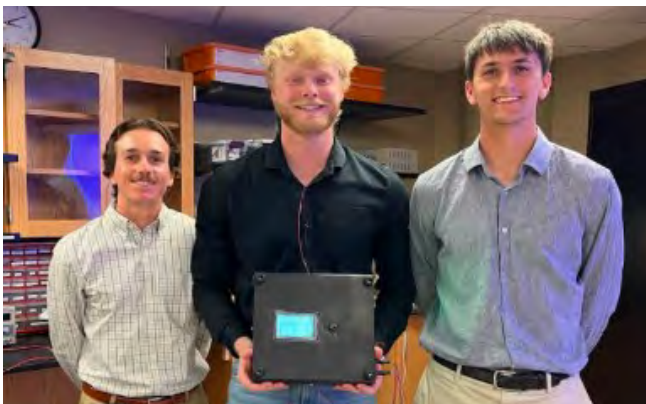
*Joseph Accurso, William Anderson,
Nathan Olson*

Electrocardiogram (ECG) machines are a critical piece of medical equipment used to detect abnormalities in heart rhythms and provide early indications of future heart-related issues. Remote healthcare clinics often lack reliable access to electrical power and are tasked with operating in harsh environments and weather conditions. These challenges limit their ability to operate medical equipment and make it difficult for routine healthcare to reach the removed communities that need it the most.

Therefore, there is a need for a portable ECG machine that can accurately measure, display, and classify abnormal heart rhythms while solely relying on renewable energy as its primary source of electrical power. The ECG must also be portable and waterproof in order for it to be deployed in various environments and weather conditions. The system must be easy to use, and the non-diagnostic arrhythmia classification must be intuitive for any provider, regardless of their level of medical training. A portable ECG is particularly advantageous for areas with limited access to professional healthcare and hospital systems. The self-sustaining nature of the proposed device allows for

use in areas where there is no reliable connection to the electrical grid. The non-diagnostic classification is sufficient for the purpose of recommending the patient to seek additional treatment from a medical professional. With the help of this proposed device, small clinics can bring routine care to areas that may otherwise go without.

This system aims to meet these requirements and as a result, provide arrhythmia detection to patients who otherwise would be delayed in accessing this service. The system can be easily carried using a standard backpack, has achieved an ingress protection rating of IP55, can support five days of nominal use when fully charged, can be easily recharged using an onboard solar panel, and will survive the typical wear and tear of busy healthcare clinics. The system currently supports single-channel Lead 1 measurements using a standard four-wire ECG setup. The user can view patient heart rhythms on the LCD screen with



(Lt-Rt) Joseph Accurso, Nathan Olson, William Anderson



Electrical Capstone Projects

minimal delay, interpret rhythm classifications provided by the internal machine-learning model, and easily interface with the system using simple buttons, switches, and a rotary encoder.

IEEE Robot

Client: IEEE Region 5

Augustine Mahsman, John Morris

This project aimed to create an autonomous robot to compete in the Region 5 IEEE (Institute of Electrical and Electronics Engineers) robotics competition. The robot utilized sensors, motors, and a Raspberry Pi



(Lt-Rt) John Morris and Augustine Mahsman with Robot

microcontroller to carry out various tasks as defined by the competition's game manual. The robot successfully carried out many of the tasks and qualified for the final round, placing 7th overall.

Radio Telescope

Client: Benedictine College Physics and Astronomy

*Department
Sarah Hanson,
Jacob
Schoenwalder*

A radio telescope requested by the Physics and Astronomy Department was previously worked on by two teams of engineers and one team of computer scientists.

However, the project was unable to be successfully completed due to an incomplete coordinate conversion code and failed communication between the software and hardware. The current team's goal was to fix these issues and to update hardware to be within ± 0.5 degrees of tolerance. A MATLAB code was written to convert celestial



Radio Telescope



Mechanical Capstone Projects



(Lt-Rt): Brendan Baier, Chase Robertson, Paul Wilkin (seated)

coordinates of the desired celestial body to be tracked to azimuth and altitude coordinates. The output of the MATLAB code is then processed by an Arduino which controls the telescope. This allowed the telescope to track a user desired celestial body over a period of time.

Chair Force 1

Client: Ainsley's Angels

Brendan Baier, Chase Robertson, Paul Wilkin

This project presents the final design of a running chair developed in partnership with Ainsley's Angels, a nonprofit dedicated to enabling individuals with disabilities to participate in endurance running events. The primary goal was to create a safe, adaptable, and durable chair capable of accommodating riders up to 200 lb while meeting the need for a fully reclining and adjustable seating system.

A key design focus was the adjustable seat back, which allows the chair to accommodate riders with a wide range of physical needs, particularly children requiring different levels of support and positioning. The design includes a modular front fork system for switching between road and beach tires, as well as a rear wheel system in which the wheels slide onto a rotating axle and are secured with removable pins, allowing for quick tire changes across varying terrain.

The chair utilizes a primarily bolt-together construction, simplifying assembly, maintenance, and transportation while enabling easy disassembly for storage in standard vehicles. The final design meets all the functional and performance requirements outlined by the sponsor.

Overall, the solution provides a durable, user-friendly mobility platform that supports the mission of Ainsley's Angels by increasing accessibility and enabling more individuals of varying abilities to participate in inclusive racing events.



(Lt-Rt): Kalen Wojtkun, Joseph Campbell, Liam Philbin, Jesse Cara



Mechanical Capstone Projects

Core Cleaning Crew

Client: Henkel

Kalen Wojtkun, Joseph Campbell, Liam Philbin, Jesse Cara

Henkel commissioned the Core Cleaning Crew through Raven Engineering to develop a cleaning system to remove polyurethane foam and Bomix release agent residue from their polypropylene injecting casting cores. Henkel uses these cores in the manufacture of diesel exhaust filters for automotive applications. Henkel's existing cleaning method is an ineffective, labor intensive, manual process which uses IPA wipes. The Core Cleaning Crew has designed a semi-automatic mechanical core scrubber. It is a scalable module which cleans a single core at a time via a rotating wheel and 3M sponges. This module comes on a test stand which incorporates basic user interface, safety features, and potential scalability. The cleaner uses an easily disposable cleaning fluid. Research done by the Core Cleaning Crew provides multiple alternative cleaning fluids, each having different cleaning performance. The Core Cleaning Crew also developed more effective manual cleaners to supplement existing processes. Testing has proven this cleaner module to be effective and a significant improvement over Henkel's previous process.



(Lt-Rt): Clarke, Trainor, Michael, Smith

Mad Mixers

*Client: Liam Morel from Mud Mixer
Maria Clarke, Sebastian Michael,
Augustine Smith, Delaney Trainor*

The goal of this project was to make a custom dry concrete mixer. The design was required to meter and mix different ratios of sand, gravel, and cement into a variety of concrete grades, allowing contractors to buy raw materials for their projects, which are cheaper than the premixed concrete. The machine was manufactured so it is easy to disassemble and ship to customers. This unit is compatible with the Mud Mixer, which combines dry concrete with water at 60 pounds per minute. The design features a hopper with three compartments which hold sand, gravel, and cement. The system then meters the raw materials using slide gates and uses



Mechanical Capstone Projects

vibratory motors and a rotary agitator to promote material flow. Then, the material falls into a mixing screw which both



(Lt-Rt): Reuben Coombs, Daniel Larkin, Johnny Bauer

conveys and mixes the raw materials. Finally, the material is put into the Mud Mixer, which adds water and outputs the mixed concrete on the construction site.

Quarter Pounders

Client: Progress Rail

Reuben Coombs, Johnny Bauer, Daniel Larkin

Progress Rail, a Caterpillar Company in Atchison, is a manufacturer of railroad tie clips, which they make using large dies. They currently own an adjustable maintenance table which allows them to work on these dies. This table allows the operator to adjust the height they are

working at; however, their design is unable to rotate, forcing the operator to perform maintenance at odd angles. In light of this, Progress Rail requested that a quarter-sized model of a new adjustable maintenance table incorporating rotation be designed and manufactured by a Benedictine College senior design team. Our team, the Quarter Pounders, stepped up to the challenge. Specifically, this model needed to be able to lift and rotate a 500 lb model die, as well as withstand a 300 ft-lb torque applied to the model die by a machinist. These design constraints were solved by splitting the project into 4 subsystems: Lift, Rotation, Clamshell, and Electrical. The lift subsystem used a motor and screw jack to provide vertical lift capability. The rotation subsystem used a motor and speed reducer to enable an operator to rotate the die. This subsystem also used a retractable pin to prevent unwanted rotation and decrease the stress on the gearbox when the operator wanted to apply torque on the die. The clamshell subsystem used a motor and a bi-directional lead screw to open and close a set of jaws that would hold the die in place. The electrical subsystem sends power to all actuators, while also using limit switches to prevent the machine from moving beyond its operating limits. The combination of these subsystems provides Progress Rail with a model that can be scaled up and used on their manufacturing floor in the future.



Mechanical Capstone Projects

SEAT

*Client: Randolph Mobility and Wellness
Anna Leuer, Rebecca Madden, Owen
McOmber, Skyler Specht*

Mr. Randolph owns a mobility aid distribution center located in St. Joseph, Missouri. He frequently works with different kinds of wheelchairs and ramps and noticed existing ramps did not meet the needs of many of his clients. Currently, there are two major models of ramps for cars: permanent van modifications, which are expensive and can't be easily removed or modified, or folding ramps that are heavy, difficult to use, and rattle during transport. Unsatisfied with these solutions, Mr. Randolph requested the help of Team SEAT to create a ramp to meet his clients' needs.

The goal of the project was to create a portable wheelchair ramp for ambulatory wheelchair users; people who have some level of mobility and are not confined to their chair. As a result, the ramp was designed as a non-occupancy ramp intended for a variety of van models. Users will load their scooter or wheelchair into their vehicle and can walk around to their seat. Additionally, the system is designed for wheelchairs that can weigh up to 200 lbs with a max wheelbase width of 25 inches. The system is designed for a minimum safety factor of three for all loading conditions.

Mr. Randolph explained how, typically,



(Lt-Rt): Skyler Specht, Owen McOmber, Rebecca Madden, Anna Leuer

ramps are difficult to store and rattle around during transport. He requested a fully enclosed box for the ramp to slide easily in and out of, giving both the ramp and wheelchair designated housing. Many of Mr. Randolph's clients have limited strength and mobility, so ease of use and lightweight are essential features. Specifically, the ramp and enclosure should weigh less than 50 lbs each, and the system should be ergonomic, require simple motions and little forces, and utilize an assisted lift.

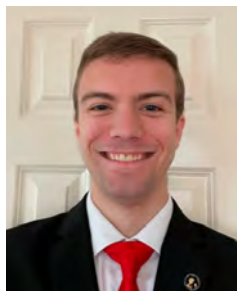
The redesigned system features a ramp and enclosure system that each safely supports a 200 lb. load and is capable of supporting Mr. Randolph's wheelchairs with a safety factor exceeding three. A linkage slider system allows the ramp to slide easily out of the enclosure and into position without requiring the user to lift the full weight of the ramp. Additionally, the system can be easily installed and removed from a vehicle by separating the ramp and enclosure.



Chemical Engineering



Louis DeLellis



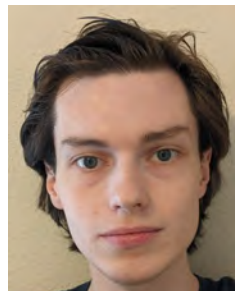
John Freitag



Elizabeth Kastl



Kiera Russell



Thomas Walsh

Civil Engineering



Samantha
Bertoncino

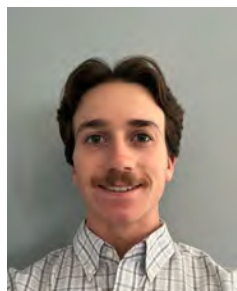


Sophia
Caughron



Rory VanTrease

Electrical Engineering



Joseph Accurso



William Anderson



William
Hamada-Canez



Sarah Hanson



Augustine
Mahsman



John Morris



Nathan Olson



Jacob
Schoenwalder



Mark Stromberg



Mechanical Engineering



Brendan Baier



John Bauer



Joseph
Campbell



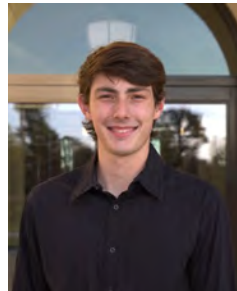
Jesse Cara



Maria Clarke



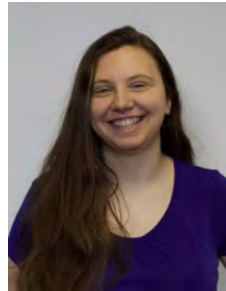
Reuben
Coombs



Zachary
Johnson



Daniel Larkin



Anna Leuer



Rebecca
Madden



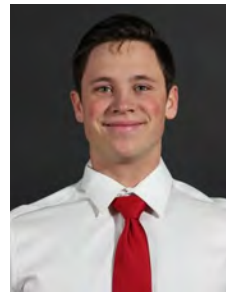
Owen
McOmber



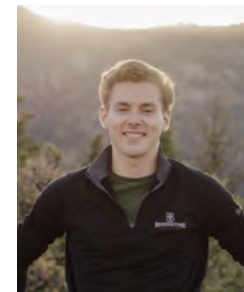
Sebastian
Michael



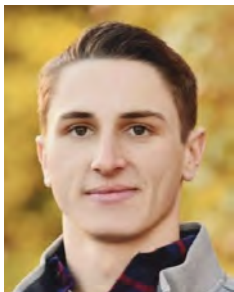
Liam Philbin



Chase
Robertson



Augustine Smith



Skyler Specht



Delaney Trainor



Paul Wilkin



Kalen Wojtkun



May 2026

Mechanical Engineering

Brendan Baier
John Bauer
Joseph Campbell
Maria Clarke
Reuben Coombs
Zachary Johnson
Daniel Larkin
Anna Leuer
Owen McOmber
Sebastian Michael
Liam Philbin
Chase Robertson
Paul Wilkin
Kalen Wojtkun

Electrical Engineering

Joesph Accurso
William Anderson
John Morris
Nathan Olson
Jacob Schoenwalder
Mark Stromberg

Chemical Engineering

Louis DeLellis
Elizabeth Kastl
Thomas Walsh

Civil Engineering

Sophia Caughron
Rory VanTrease

August 2026

Mechanical Engineering

Skyler Specht
Delaney Trainor

Civil Engineering

Samantha Bertoncino

December 2026

Mechanical Engineering

Jesse Cara
Rebecca Madden
Augustine Smith

Electrical Engineering

William Hamada-Canez
Sarah Hanson

Chemical Engineering

John Freitag
Augustine Mahsman
Kiera Russell



Awards



St. Patrick Award Outstanding Engineering Student and Outstanding Mechanical Engineer Maria Clarke



St. Sebastian Scholar Athlete Award Joseph Accurso



St. Joseph Outstanding Student Worker Sarah Hanson



Outstanding Electrical Engineer Mark Stromberg



Outstanding Chemical Engineer Elizabeth Kastl



Outstanding Civil Engineer Sophia Caughron



Awards



Mechanical Engineering Graduates and Faculty



Electrical Engineering Graduates and Faculty



*Chemical Engineering Graduates and Faculty
(Not pictured: Dr. Sam Rothstein)*



Steve Spencer Mechanical Engineering Design
Team: Mad Mixers
Maria Clarke, Augustine Smith, Sebastian
Michael, Delaney Trainor



Best Non-ME Team: Pulse Pioneer
Joseph Accurso, Nathan Olson, William
Anderson



Awards



Civil Engineering Graduates and Faculty



Maria Clarke Addresses Senior Class



Presentations Gain High Attendance



Mud Mixers Presentation



Faculty Conversing Before Lunch



Dr. O'Malley Addresses Graduates



Senior Awards Lunch



Alumni News

Class of 2013

Chelsea Bell married Brad Bell in January of 2013 and by the summer was officially a Benedictine graduate. She began her career at Union State Bank in Atchison and helped with the family livestock and farming operations. Chelsea and Brad welcomed a daughter in 2015, followed by a son in 2018. At that point, Chelsea was blessed to stay home with her children. Shortly thereafter, her family meat processing business, Diamond C



Chelsea Bell and family

Food Service, started to pick up. By January of 2022, a larger, more efficient facility was completed, and she returned to full-time work. In 2025, the Bell family welcomed another daughter. Chelsea credits the challenge of being

both a student athlete and engineering student with preparing her for the sometimes overwhelming workload of being a mom, business owner, and part of a family farm and livestock operation.

Class of 2014

Andy Green graduated with his degree in Civil Engineering and a minor in

Theology. Relying on the strength of his well-rounded Benedictine education, he spent the next 2 years serving as a FOCUS missionary, at both Southeast Missouri University and Eastern Michigan University. Following his missionary work, he spent a year as a seminarian for the Archdiocese of Denver, but after discerning out spent the next 3 years working in youth ministry. Shortly after, he married his wife, Jordyn, and the three have 4 beautiful



Andy Green with wife, Jordyn, and children Chiara (4), Zelig (2), Evelyn (6), and Monica (born Oct. 2025)

daughters. After his time in youth ministry, he began work at RS&H, where he has earned his Civil PE license and is currently employed as a Project Engineer.

Darren Wellbrock is currently working as a Maintenance Superintendent over the Instrument & Electrical shops at CVR Energy, Inc. After graduating with his degree in Mechanical Engineering, he started his career at Experitec, Inc. in Lenexa as a Systems/Field Engineer. After a few years onsite as a contractor, he was offered a full-time position with CVR Energy in Coffeyville, KS as a Control Systems Engineer. He was married to his wife, Madison, in September of 2025 at



Alumni News



Darren Wellbrock with wife, Madison

the Basilica of St. Fidelis in Victoria, KS. He is confident that his Benedictine education helped him to become a more well-rounded engineer and out-of-the-box thinker.

Class of 2015

Trevor Sowers began his career as a Manufacturing Engineer in the Fabrication department at Harley-Davidson in the KC area upon graduation. During this time, he and his wife, **Becca (Gatchet '14)** Sowers were married. From Harley-Davidson, Trevor moved on to designing carry-deck cranes with Broderson Manufacturing, and he and his wife welcomed their son, Noah, in 2021. As Broderson began moving their work overseas, he decided to move on to Harmar Mobility. Because of the nature of his work, which is to help people with disabilities live a life they would not otherwise have the ability to, Trevor is confident that he is doing his best work.

Class of 2017

Margaret Donoho graduated with her degree in Civil Engineering and moved to

Kansas City to begin work as a bridge designer at HDR Engineering. She loved her work there, having the opportunity to work on a plethora of interesting projects. It was during her time at HDR that she ended up meeting her husband, also a Civil Engineer, who now works at JE Dunn Construction. After 5 years at HDR and with an MBA now under her belt, she transitioned to Kaw Valley Engineering in the Spring of 2022 to begin working as a project manager and bridge group lead. Her job at Kaw Valley allowed her to step into the managerial side of things, which presented her with an enjoyable challenge. During this time, she obtained her PE license, and is now licensed in Missouri and Kansas. In Fall of 2022, she and her husband Scott were married, and the following fall, they welcomed their daughter Ella into their lives. In the Fall of 2025, the family welcomed their son Louis. Now, Maggie stays at home with her children, which is truly her greatest adventure. In her words, "Although



Margaret Donoho with husband, Scott, and children, Ella and Louis

sometimes I miss the day to day



Alumni News

of my engineering life, I know I am right where God wants me to be!"

Class of 2018

Nicholas Brouillette graduated with a degree in Mechanical Engineering and shortly thereafter married his best friend, Kathryn, also a Benedictine graduate. He worked in Kansas City for about a year, during which time he and his wife welcomed their first child. Shortly after the onset of the pandemic, the Brouillette's moved to Massachusetts to be closer to Nicholas's family and so that he could begin work at ITW. Starting in a tech support and training role to familiarize himself with the industry and company, he soon switched to a Mechanical Engineering role. During this time, his family also expanded, welcoming two more children and buying a house in a nice rural town, where they have started raising chickens and doing some extensive gardening. At ITW, Nicholas has helped with the design of a newly released stencil printing machine, and three more brand new machines for PCB production that will be released in the coming years.

Austin Windsor threw himself into the manufacturing world with a passion for robotics and technical sales upon receiving his degree in Mechanical Engineering. He finds himself fortunate to

be in a role where both those passions coexist, one that takes him to manufacturing facilities across the country and exposes him to the inner workings of industries most people never get to see. His degree from Benedictine, he says, "Was the cornerstone of my technical sales career, instilling both the depth of knowledge required to understand complex challenges in the manufacturing world and the disciplined approach to creating valuable solutions." Beyond the professional milestones, the years since graduation have brought some of Austin's greatest gifts. He met his wife, and the two have built a life together in Kansas City, complete with two dogs, incredible friends, many of whom are Benedictine graduates themselves, and exciting plans for the future. In his own words, "My time at Benedictine brought me to the Midwest, set my career in motion, and gave me a head start on a life I am genuinely proud of."



Austin Windsor with wife, Maddie, and dog, Peaches



Alumni News

Class of 2019

Saige MacKay graduated from Benedictine and married Josh MacKay in April of the following year. While a student, she helped found the Benedictine College Chapter of Sleep in Heavenly Peace and was also an athlete, both of which helped in her career development. She started



Saige MacKay with husband, Josh, and daughters, Charlotte (5), Willow (2.5), and Hazel (5 months)

her career as an estimator at J.R. Butler, Inc., where she continued to work for five years, but has since

transitioned into being a homemaker and now works

as a Stewardship Coordinator at her local church in the Diocese of Wichita. Saige and Josh have three daughters: Charlotte, Willow, and Hazel. While she may not, technically speaking, use her engineering experience much anymore, she is still grateful for her Benedictine education and the strong work ethic she developed throughout her time as a student.

Rachelle (Regli) Moore graduated with her degree in Mechanical Engineering and is currently working as a Fleet Manager for Solar Turbines. She

started work as a Field Service Representative in February 2020 in San Diego and by the end of the year was out in the field working on mechanical, electrical, coding, piping, and rigging/lifting aspects of industrial gas turbines. In May of 2023, she moved on to her current role as Fleet Manager, initially remotely monitoring turbines that ran compressors for Kinder Morgan's Tennessee Gas Pipeline. On January 6th, 2024, Rachelle married Barrett Moore, and the two happily welcomed their daughter, Rosemary, on January 3rd 2025. The couple resides in Hillsdale, MI, where Rachelle continues her work as a Fleet Manager.

Alex Pogasic graduated with a degree in Chemical Engineering. He began his career as a Process Engineer for Carmeuse in 2020 and has worked for the company ever since. During this time, he and his wife, Bridget, were married and had three children. His time with Carmeuse has seen great growth, and now he serves as a Regional Reliability Engineer. An interesting project he was involved in was a refractory internal project. The team used a design company from Brazil to aid in improving the designs of the refractory heat exchangers in their long rotary lime kilns. Alex then took the designs and prepared a timeline for installation, turned it into a capital project, procured materials, and hired the



Alumni News

installers. He has enjoyed applying the skills he learned at Benedictine to real world projects, particularly through dealing with multiple people, timelines, and budgets. In 2024, he joined the Army National Guard and graduated Officer Candidate School in April 2026.

Class of 2020

David Breda received his Civil Engineering degree and began working at Black & Veatch, moving throughout the states of Kansas, California, and Colorado. He graduated from their EDGE rotational program and worked in federal



David Breda with wife, Angela, and daughter, Lucia

site design, water transmission line design, and water/wastewater utility asset management. He transitioned to his current role as Sales Engineer at Sunward Steel, a manufacturer for pre-fabricated

steel buildings. In January 2024, he obtained his PE license. That August, he was married to his wife, Angela, and the two welcomed a daughter in June of 2025. He values the education he received at Benedictine, which helped him become a more well-rounded individual.

Paul Johnson currently works as a Structural Engineer Associate for Walter P Moore, where he uses his Civil Engineering degree in designing sports stadiums and large institutional buildings all over the country. His favorite milestone to hit was being the Project Manager and Engineer-of-Record for the Chiefs training facility expansion. Paul has also worked as a bridge engineer for WSP and in building design for Hollis + Miller Architects, primarily designing schools and other educational structures. Amidst all his success at work, Paul and his wife, Tessa, were blessed with a son, he achieved his PE license, and he has been working part-time towards achieving his Masters' degree through Purdue.

Grant Lahm graduated with his degree in Civil Engineering. As a student, he interned at Behlen Manufacturing Co., and upon graduation, he continued working there as a design engineer until 2021. After his time with the company, he went through the Officer Candidate School pipeline and joined the United States Army. He was commissioned as a Second Lieutenant in 2022 and was promoted to Captain in 2026.

Grant currently works as a Company Commander. His time as a student athlete on the Men's basketball team has also been invaluable in his professional and personal development. In the Army,



Alumni News

he enjoys connecting with his soldiers through deep theological and philosophical conversations. In August 2026, he plans to attend the University of Nebraska College of Law to earn his JD and become an attorney in the Judge Advocate General Corps.

Josh Sullivan has used his Mechanical Engineering degree in a variety of capacities, working for both Enabled Energy and DMA Engineering, and now contributing to HVAC design for large scale housing communities with Sekisui House US. During his time at Benedictine, he credits his senior design course, which had to completely change scope due to the pandemic, with preparing him to adapt to unexpected circumstances. His work brought him to Denver in 2021, and since then he has been highly involved in the Denver Catholic community, where he bartends for swing dances, serves as a sacristan for daily Mass, and sings in a choir.

Joseph Tynan graduated with his degree in Civil Engineering and began work as a civil engineer for Core Consultants. After 2 and a half years, he heard the call to pursue a vocation to the priesthood and is now in this 3rd year of seminary at St. John Vianney Theological Seminary finishing up his philosophy classes. Joseph attributes a large part of the development of his prayer life to his

time at Benedictine, which he says helped him to grow in virtue, not only leading to the discernment of his vocation but also equipping him to be a solid worker.

Class of 2022

Matthew Kobs is employed as a Project Engineer at Calder Richards Consulting Engineering. Since graduating with his degree in Civil Engineering, his life has been full of work and traveling. Even though his work has been demanding, he tries to travel as much as possible amidst the business, with his coolest trip since graduation being a 16-day river rafting trip through the Grand Canyon. Matthew has also passed the PE Civil Structural Exam and will be able to obtain his licensure in February of 2027. His work in the Salt Lake area has included structural design of schools, multi-family buildings, restaurants/bars and everything in between. He credits his education and experiences at Benedictine for teaching him to work even harder when things get busy and stressful. During his time in college, his favorite class was Environmental Lab with Dr. Merkle, where he was able to learn new topics in a very hands-on manner and was given the freedom to truly do engineering.

Justin Nichols is a Mechanical Engineering graduate. He and his wife,



Alumni News

Annika, also a Benedictine alum, got married the September after they graduated. He began his career as a Manufacturing Engineer at Custom Truck One Source, where he worked for a year and a half. He and his wife had a son in September of 2023, and a month later, he took a job in a new industry as a Controls Engineer for Integrated Controls & Engineering. He helped in recruiting Wildes Rempe, also a Mechanical Engineering '22 graduate, in March of 2024, and he and his wife welcomed their second son in April of 2025. In December, the Nichols family moved from Independence, MO to Overland Park, KS and are parishioners at Holy Trinity in Lenexa. When not playing with the kids, he enjoys running and hopes to complete a 100 mile ultra marathon this year.

Jack Torline is working as a Civil Engineer for GFT After graduation, he moved to Colorado and worked for Martin/Martin before moving on to Goodbee and Associates. From there, he moved to Parkville, MO, where he began working for GFT. Jack is married to Melanie Torline, also a Benedictine graduate, and the two are expecting their first baby in April of 2026. Jack has already passed the PE exam and is looking forward to being eligible to obtain his official licensure in January 2027. His classes at Benedictine have been useful in his career, especially in designing an

interchange at I-435 and State Ave. The hydrology classes, roadway design, and CAD training he received at Benedictine have been integral in every part of the design.

Class of 2023

Isabel Cobb graduated with her degree in Mechanical Engineering. She currently works at Bell Flight as an Airframe Stress Engineer. She has worked on both the Virgin Galactic and 525 Programs at Bell. While on the 525 Program, she earned an Honors Award for her hard work and dedication. Her time at Benedictine taught her to persevere through hardships and has been crucial in her career development. Outside her work, she has gone on numerous unforgettable trips to Hawaii, Australia, and Medjugorje.

Thaddeus Friess graduated with his degree in Civil Engineering and has been working for Scott Fazekas and Associates as a Plan Check Engineer. Since graduating, he also has gotten married to his wife, Bella, and the two now reside in California. He credits his educational experience at Benedictine for giving him a foundation of learning how to learn so that he can quickly adapt to any job at hand. Thad is also in the process of obtaining his PE license, where he has passed the national exam and is working on the California-specific exams.



Alumni News

John Paul Alicea is currently using his Mechanical Engineering degree working as a Mechanical Project Engineer at Mid Atlantic Industrial Construction. His education at Benedictine prepared him for the work that he does now by training him in understanding mechanical systems. Also in his current role, he oversees a couple of projects managing storm water in the Baltimore Fort McHenry Tunnel and in the Baltimore Harbor Tunnel. His knowledge of interpreting construction plans, gained while at Benedictine, has been integral to the success of these projects.

Class of 2024

Davis Wagner is an Applications Engineer for Vectis Automation, a company which makes welding and plasma cutting roots. In his current role, he advises companies on how to be successful with automation. He credits his Benedictine education with providing him the foundation and background to learn more at his job and become a specialist. His favorite course while was senior design, which has helped him in leading meetings, presenting in front of large groups, and being resourceful enough to teach himself what he needs to know to solve problems.

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Dr. Scott Newbolds

Engineering Missions

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Ingenium: noun, from Latin meaning natural talent or disposition.

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Benedictine College School of Engineering Newsletter

INGENIUM, Summer 2026

INGENIUM

School of Engineering Newsletter

Ingenium signifies intelligence, character, genius — all of which describe Benedictine College engineers. The use of the Latin language shows solidarity with the Church, whose official language is Latin, and with the scientific community, which for many years communicated primarily through Latin. *Ingenium* is a proud testament to our history and character as engineers and as members of the Benedictine College community.



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