

## From the Chair

Welcome to the 2025 edition of *Civil Matters*! It's been another exciting year in the Reiners Department of Civil and Environmental Engineering, and I'm proud to share some of the highlights that showcase the energy, talent, and impact of our students, faculty, and alumni.

### Student achievements

Our students continued to shine inside and outside the classroom. Six were named Asphalt Pavement Association of Indiana (APAI) Scholars. Many participated in industry events, including the Constructor for a Day program, the Civil Engineering Professional Development Seminar (CEPDS), and the ASCE

Indiana-Kentucky Symposium, where we placed second in 3D-printed bridge and third in surveying. Students also presented trail crossing data to Fort Wayne officials and engaged in real-world design challenges in Bryan, Ohio.

Hands-on learning remained a focus. Our senior trip included site visits to a cement plant, a lock and dam, and the I-69 Ohio River bridge project. Engineers Without Borders launched a new initiative in Ecuador, and we celebrated community by decorating a Christmas tree for Project Help and holding our traditional welcome picnic, game night, and senior golf outing.



### In this issue

<b>Trine Faculty</b>	<b>3</b>
<b>Holiday Cheer</b>	<b>7</b>
<b>Department News</b>	<b>9</b>
<b>Alumni News</b>	<b>31</b>

# From the Chair

## Faculty excellence

Dr. Jeremy Rentz joined the advisory board for The Teaching Professor Conference and continued his national leadership in faculty development and active learning. Dr. Hemin Mohammed brought advanced drone technology to the Surveying Lab, giving students practical experience in photogrammetry and LIDAR-based mapping.

Dr. Bill Barry has returned to full-time teaching in the Reiners Department of Civil and Environmental Engineering after serving four years as dean of the Allen School of Engineering and Computing. During his time as dean, he led several major initiatives that strengthened the school:

- Established the cybersecurity and computer science programs
- Oversaw the renovation and modernization of Fawick Hall

- Guided a strategic reorganization of academic departments
- Opened the Steel Dynamics Inc. Center for Engineering and Computing

We are grateful for Dr. Barry's leadership and service and are excited to welcome him back to the classroom.

I was humbled to be recognized with the Charles & Sue Ragan Gelet Excellence in Teaching Award and the Professor Gerald H. Moore Overall Excellence in Teaching Award. These honors reflect the strong culture of teaching excellence that defines our department.

## Alumni impact

Our alumni continue to represent Trine proudly—from BP drilling engineers and Coast Guard service members to

honorees like Alex Duran (ASCE Young Member of the Year) and Megan Slipher, who returned to Indianapolis after a distinguished career in telecommunications and project management. We also heard from Cameron Horan, whose remarkable path took him from rural Indiana to deep-sea oil platforms and doctoral research in mineral engineering.

As always, thank you for being part of our civil engineering family. Whether you are a current student, graduate, faculty member, or friend of the program, your contributions help us build a stronger future together. I look forward to what the next year will bring.



# Trine Faculty

## Civil engineering faculty recognized

Gary Greene, department chair and professor in the Reiners Department of Civil and Environmental Engineering was awarded the Charles & Sue Ragan Gelet Excellence in Teaching Award. Greene was also the recipient of the Professor Gerald H. Moore Overall Excellence in Teaching Award.



Bill Barry, Ph.D., was recognized for his valued service as dean of the Allen School of Engineering and Computing as he prepares to transition back to a classroom role.



# Trine Faculty

## Rentz named to Teaching Professor Conference board

A Trine University faculty member has been selected to serve on the Advisory Board for The Teaching Professor Conference, a prestigious role that involves shaping the direction of future conferences for higher education faculty.

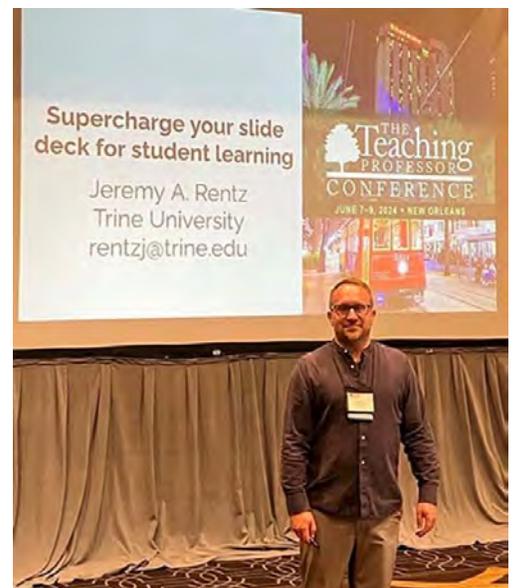
Jeremy Rentz, Ph.D., Schantz Distinguished Professor in the Reiners Department of Civil and Environmental Engineering, has attended The Teaching Professor Conference for the past decade. Over the last five years, he has led five sessions centered on active learning and teacher slide deck design. During the last two years, he has also facilitated two preconference workshops titled "Talk Less, Teach More," with Michelle Blank Rentz of Goshen College.

The Teaching Professor Conference, which last year attracted more than 800 attendees to New Orleans, gathers educators from across disciplines to discuss innovative teaching strategies and foster professional growth. The next conference took place June 6-8, 2025, in Washington, D.C., where Prof. Rentz reviewed proposals and presented once again. Look for additional information in the 2026 newsletter.

"I am honored to join the Advisory Board and to continue contributing to a conference that has played such a pivotal role in my professional development," Rentz said.

At Trine, Rentz serves on the University's Center for Teaching Excellence committee, which supports faculty development across campus

through workshops, seminars, and book clubs. Trine places a strong emphasis on teaching excellence, encouraging faculty to engage students in meaningful, active learning experiences that go beyond the traditional classroom. Rentz embodies this commitment by encouraging educators to design classrooms where students do the work, knowing that those who do the work are the ones who do the learning.



Jeremy Rentz, Ph.D.—Professor

# Trine Faculty

## Trine mapping drone lifts off

Hemin Mohammed, Ph.D., assistant professor in Trine University's Reiners Department of Civil and Environmental Engineering, pilots the department's DJI Matrice 350 RTK drone on Tuesday, Dec. 3, for students in the CE 2001: Surveying Lab. The drone is equipped with state-of-the-art capabilities that include LIDAR (Zenmuse L2) for precise

topographic mapping and Photogrammetry (Zenmuse P1) for high-resolution imagery and mapping. Dr. Mohammed said the technologies represent some of the most advanced tools currently used in the surveying and civil engineering industries. Students in the Surveying Lab recently used the drone to create a contour map of the university's soccer field and its surrounding areas,

providing them with hands-on experience in geospatial data collection and analysis.

Dr. Mohammed said working with the drone develops student skills in drone operation and mission planning, collecting and processing data using LIDAR and photogrammetry, and using geospatial tools and integrating data into industry-standard software.



# Trine Faculty

## Trine well-represented at annual Teaching and Learning Conference

More than 40 Trine University faculty participated at the 28<sup>th</sup> annual Fort Wayne Teaching and Learning Conference, with four presenting sessions and Jeremy Rentz, Ph.D., Schantz Distinguished Professor in the Allen School of Engineering and Computing, serving as plenary speaker.

Held Feb. 21 at Purdue Fort Wayne, the Fort Wayne Teaching and Learning Conference offers faculty from area institutions the opportunity to share their insights on educating students more effectively.

“This year’s conference reinforced the importance of adapting to the rapidly changing landscape of higher education,” said Rentz. “Many sessions focused on

innovative ways to enhance student engagement, leverage technology and support student success — topics that align well with Trine’s mission to provide high-quality, student-centered education. With such strong participation from our faculty, we are not just attending but actively shaping the conversation about the future of teaching and learning.”

### Five Trine faculty give presentations

Rentz’s address was titled “Transparent Teaching in the Age of AI” and covered how transparent teaching can bridge the gap between course objectives and student motivations while bringing integrity back to the forefront.

Other Trine faculty leading sessions were Michael Smith, assistant professor, Depart-

ment of Mathematics, “Annoyingly Effective: Redefining Office Hours as a Core Part of Student Success”; Joanna Claudy, assistant professor, Department of Humanities and Communication, “From Kahoots to Board Games, Practical Gamification in the Classroom”; Jill Erwin, Ph.D., associate professor, Department of Humanities and Communication, “The Artificially Intelligent: Critical Thinking and Writing in the Era of AI”; and Dawn Moore, adjunct, Ketner School of Business, “Cultivating Cultural Competence in the Classroom.”

“While we’ve had strong participation in past years, having five faculty members speak at the conference is a great testament to the growing engagement of our university in professional development and pedagogical in-

# Holiday Cheer

development and pedagogical innovation,” said Rentz.

Rentz said Trine University has been a part of the Fort Wayne Teaching and Learning Conference since it began in 1998, and he’s excited to see the university’s representation grow.

“The conference offers faculty a chance to engage in meaningful discussions about teaching strategies, student success and the evolving role of technology in education,” he said. “Attendees leave with new ideas, practical strategies and connections with colleagues from other institutions.”

“The Fort Wayne Teaching and Learning Conference has always been a fantastic environment for educators to exchange ideas, and the increasing number of Trine faculty engaging as both

presenters and attendees highlights our institution’s commitment to continuous improvement in teaching and learning.”

## Spreading holiday cheer

The holiday season is a time for giving, and Trine University's Reiners Department of Civil and Environmental Engineering has embraced this spirit wholeheartedly. This year, they donated ornaments and decorated a Christmas tree, which was generously provided by Project Help of Steuben County, for a local family who might not have had a tree for Christmas.

This heartwarming tradition is part of an annual event where approximately 40 Christmas trees are decorat-

ed by various Trine academic departments, offices, and student groups, including the American Society of Civil Engineers (ASCE). The Tree Decorating Event is a festive occasion where donors come together to enjoy snacks and Christmas music while adorning the trees. These beautifully decorated trees are then displayed in the Rick L. and Vicki L. James University Center before being handed over to Project Help for distribution.

Adding to the festive spirit, the Reiners Department of Civil and Environmental Engineering also held their annual Christmas gathering on Saturday, December 14th. Faculty, staff, and guests gathered for a delightful dinner at Vinland Reserve in Fort Wayne, celebrating the season with good food and great company.

# Trine Faculty

Through these events, Trine University not only spreads holiday cheer but also strengthens community bonds, making the season brighter for everyone involved.



*Pictured left to right: Civil students Emma-Lyn Stephenson, Daphne Bush, Annalise O'Daniel, and Erin Downing.*



*Pictured above: Katherine Murphy, Ya Barry, Lynn Tyler, Tim Tyler, Gary Greene, Awaz Falih, Hemin Mohammed, Dave Thomson, Sheri Thomson, Michelle Blank Rentz, Jeremy Rentz, Bill Barry, and TJ Murphy.*



# Department News

## Annual CEE-ASCE department welcome back picnic

The annual CEE-ASCE department welcome back picnic was a delightful event held on September 6th at Steuben County Park, Crooked Lake. Faculty, staff, and approximately 25 students gathered to enjoy a wonderful evening filled with activities and camaraderie.



The picnic featured a delicious dinner, followed by engaging games of volleyball and corn-hole. Attendees also had the opportunity to canoe on the serene waters of Crooked Lake, making the event both fun and memorable.



*"The road to success is always under construction." - Lily Tomlin*

# Department News

## Civil Engineering students gain industry insights at Constructor for a Day Program

On September 24th, civil engineering students had a unique opportunity to delve deeper into the construction industry through the Ohio Contractors Association's Rich DiGeronimo Constructor for a Day program. Sponsored by the association's Toledo chapter, this event provided students with invaluable hands-on experience and industry exposure.

The day's activities included informative trips to Murphy Tractor & Equipment Company, where students could see the latest in construction machinery and technology. Beyond the technical insights, the program also facilitated networking opportunities, allowing students to

connect with industry professionals and gain insights into potential career paths.

This immersive experience not only broadened the students' understanding of the construction field but also helped them build essential professional relationships, setting a strong foundation for their future careers.



*Pictured are Rhiley Paskoff (left) and Emma-Lyn Stephenson*



# Department News

## Civil Engineering academic tailgate at Homecoming 2024

On September 28th, the Civil Engineering department participated in an engineering academic tailgate for Homecoming. Visitors had the chance to connect with alumni, faculty, and staff, fostering a sense of community and nostalgia. Additionally, visitors had the opportunity to visit alumni from other academic schools, further enriching the experience.

engaging in spirited games of Euchre and collaborating to complete a challenging 1000-piece puzzle. The event was further enlivened by a delightful spread of appetizers and refreshing punch, making it a memorable night for all.



*Pictured left to right: Reece Soel, Dillan Cooper, Timothy Bohlman, Blake Dulle, Hemin Mohammed, and Ryan Gienger.*

## Annual game night brings fun and fellowship

The department's annual Game Night was a resounding success, bringing together students and faculty for an evening of fun and camaraderie. Attendees enjoyed



*Pictured above: Sydney Kalinger, Daphne Bush, Emma Beyer, and Erin Downing.*

# Department News

## Trine students, faculty participate in annual CEPDS

Ten students and three faculty from Trine University's Reiners Department of Civil and Environmental Engineering participated in the annual Civil Engineering Professional Development Seminar (CEPDS), held Nov. 21 at Purdue University.

The event attracts more than 600 professionals and students to learn about advancements in the civil engineering industry.

Ryan Hoak, a civil engineering major from Warsaw, Indiana, said he saw the seminar as an excellent networking opportunity.

Annalise O'Daniel, a civil engineering major from Indianapolis, said she decided to attend "because of the excellent

sessions they offered on niche topics in civil engineering."

"It was also a great opportunity to meet new people and learn about projects we wouldn't get to study in class," she said.

"I decided to attend the CEPDS event because I wanted to understand and gain more knowledge about the field of civil engineering, since this is the career field that I want to continue with for the rest of my life," said Chloe Hilvers, a civil engineering major from Fremont, Indiana. "I wanted to grasp the idea of what it takes, and the qualities needed to be a successful civil engineer."

### New insights

Gary Greene, Ph.D., department chair and one of the faculty who attended the

event, said the event's opening session covered an upcoming federal standard that will require pedestrian crossings to have audible instructions to help individuals with vision impairments. The standard also will apply to helping pedestrians with limited vision navigate through construction zones.

Other sessions included topics such as how to improve the durability of concrete bridge decks, innovative techniques in geotechnical engineering, design manual updates for roundabouts, and a recently completed Engineers Without Borders project to implement a water distribution system.

"I gained new insight into projects and unique solutions I had never seen before in my field," said O'Daniel.

"Additionally, I made professional connections with both

# Department News

longtime career professionals and students from other schools. I am hoping to keep in touch with these individuals and potentially collaborate in the future.”

“The topics they cover often go over our heads as students, but it is still good to be exposed to the different new technologies emerging in the field of civil engineering,” said Hoak.

“I gained a lot more knowledge about how important civil engineers are to society, and CEPDS proved to me that I want to continue my education to become a civil engineer,” said Hilvers.

Dr. Greene said there were several sessions tailored for engineering students.

“This is the second year of this innovative idea, which was implemented by the head of the organizing committee, Trine alumna Jennifer Sharkey,” he

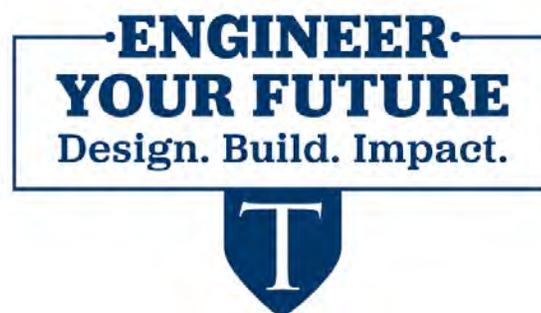
said.

Hoak said he appreciated the opportunity to expand his knowledge in structural engineering.

“Since I have a job lined up in a structural capacity, it was good to get more exposure to the field as a whole,” he said.



*Pictured above: Dr. Gary Greene, Hannah Lewis, Dr. Tim Tyler, Dr. Hemin Mohammed, Chloe Hilvers, Ryan Gienger, Blake Dulle, Clara Ledlow, Annalise O'Daniel, Trenton round, Daphne Bush, Evan Holman, Ryan Hoak, Luke Weintz, Dillan Cooper, Jacob Ferguson, and Evan Seacatt.*



# Department News

## CE senior trip covers cement plant, lock, bridge project

Nine Trine University seniors from the Reiners Department of Civil and Environmental Engineering, accompanied by three department faculty, took part in a senior trip to southern Indiana that included visits to a cement plant, a lock on the Ohio River and a project connecting Interstate 69 with a future bridge into Kentucky.

The group left campus Nov. 14.

Erin Downing said that, in addition to being interested in the projects and facilities toured, she was drawn to the experience by the opportunity to connect with other seniors and faculty outside of the classroom.

Reece Soel looked forward to seeing what he learned in the classroom applied on real-life job



sites, as well as the opportunity to interact with faculty in a more informal setting.

“Personally, I think this is a pretty unique opportunity that other schools do not offer to be more personable with your professors and share experiences outside the walls of the classroom,” he said.

### Heidelberg cement

The morning of Nov. 15, the group visited the Heidelberg

cement plant in Mitchell, Indiana.

The students and faculty toured their fully automated testing lab, the plant control room, the automated bagging factory and the cement kiln.

Gary Greene, Ph.D., department chair and one of the faculty who went on the trip, said the automated bagging factory can fill one 60-pound bag per second, stack the bags on a pallet and weatherize the pallet.

# Department News

The group also got to travel to the top of the kiln's 400-foot-tall preheat tower.

"The exhaust from the kiln is used to dry and heat the ground limestone, clay, and mill scale to improve plant efficiency," said Dr. Greene. "We walked along the kiln and peered through a portal into the end of the kiln to see the finished clinker that was produced by the kiln as it cooled. The plant produces 4,000 rail-cars of cement per month."

## **Newburgh Locks and Dam**

In the afternoon, the group traveled to Evansville and visited the Newburgh Locks and Dam, the busiest lock on the Ohio River. They were able to visit the control tower and watch an empty 15-barge tow move downstream through the lock. Both Downing and Soel said the tour was the highlight of their trip.

"I had never visited a Lock and

Dam myself so that was a new experience for me," Soel said. "The in-depth specifications and stories that the tour shared were very helpful. The gentleman that showed us around the dam was the lead maintenance man on-site. He had extensive knowledge of the machinery's inner workings and day-to-day operations. He also shared many stories about the dam over the years that gave context to what we were looking at."

## **Bridge over the Ohio River**

The next morning the group met with representatives from the Indiana Department of Transportation, Walsh Construction and Traylor Brothers, all of which are working on the first four Indiana bridges that are part of the interchanges connecting I-69 with a future bridge over the Ohio River into Kentucky.

"Initially, we met at their local project office in Evansville," said Dr. Greene. "They explained the history of the project and the details of the bridges they were building. All of the bridges are in the flood plain and the foundations are expected to be submerged when the Ohio floods over the winter."

The Trine group then traveled to the project site and saw the excavated areas where workers were driving steel pipe piles, some around 80 feet long, and constructing the concrete footing and columns.

"My career will begin in the roadway industry," said Soel. "This helped me see how calculations from the classroom are carried out in the soil on the job site. This visit brought imagination to life."

Trine alumnus Ethan Davenport, who graduated in 2020,

# Department News

works for Walsh Construction as an assistant project manager and was part of the contractor team that showed the group around the construction site.

Downing said the trip reinforced the importance of lifelong learning for her.

"Each tour guide was skilled in the profession but still emphasized how they continue to learn each day on the job," she said.

Downing and Soel also said they enjoyed connecting with faculty and fellow seniors.

"My best memory from the trip is playing euchre with all the professors," Soel said. "This was a fun environment to connect with them outside of the traditional desks of the classroom."



# Department News

## Trine welcomes record numbers to Tailgate for Talent

The Tailgate for Talent Career Fair held on September 19, 2024, was a major success. A record 145 employers participated along with record student participation. The Allen School of Engineering and Computing has approximately 300 students attend or 34%.

A record number of employers shut down Trine University's Thunder Drive as nearly 600 students participated in the annual Tailgate for Talent on Sept. 19.

Jason Blume, assistant vice president for Trine innovation 1, said hosting the Tailgate through the center of campus has been the plan since the outdoor event was introduced due to COVID restrictions.

"It has grown from that idea to become a perennial success," he said. "This year we filled all the available space between Summit Street and the east end of Thunder Drive by the railroad."

### Benefits for employers, students

A total of 145 employers participated in the event, surpassing the previous record of 139.

Alex Blauvelt, recruiter and university relations partner for MedPro, described the Tailgate for Talent as "an incredible experience."

"The event was very well-organized, and I had the opportunity to connect with a wide range of students," he said. "The atmosphere was lively and energetic, and I felt that the representatives from the companies were genuine-

ly interested in speaking with the attendees."

Gwen Kramer, talent acquisition and campus recruitment specialist for Convergix Automation Solutions, said she "had a blast meeting with future talent and past summer interns."

"We are looking forward to bringing on more new and returning talent in 2025!" she said.

Kenny Huffman, human resources recruiter and talent acquisition specialist for Legrand AV, said Trine has been a great resource for candidates for his company's Warsaw, Indiana, facility.

"Trine has been the leader in university entry-level candidates in our region, providing interns as well as direct employees," he said.

# Department News

Garrett Reed, a 2020 design engineering technology alumnus who works as a quality engineer for Milwaukee Tool, said the Tailgate allowed his company to connect with students for internships, co-ops and post-graduation rotational programs across a variety of business units and locations.

“Returning to campus as an alumnus, it is exciting to see the

growth in the capabilities of students through the development of the engineering programs and project Trine offers,” he said.

Trine students also saw many benefits from the event. Cassandra Swank, a business administration major from Sunbury, Ohio, said the Tailgate was “great practice for interviewing and a good

chance to network with people.”

“The Tailgate for Talent was an excellent opportunity to practice my formal communication skills,” said Griffin Max, a business administration major from Loveland, Ohio. “I also was presented with multiple opportunities for future employment



**SAVE THE DATE**

## Trine University

### All Major - Tailgate for Talent Career Fair

Thursday, September 25th  
12-3 p.m.  
Trine University  
Angola, IN.

Register on Handshake   
[www.https://tinyurl.com/26zwecan](https://tinyurl.com/26zwecan)

 Trine Career Center

# Department News

## Trine University students again tackling water supply challenges in rural Ecuador

The Trine University Engineers Without Borders (EWB) Student Chapter has been awarded an exciting new project to improve the water supply system in Tuntatacto, Ecuador.

This rural community of 1,200 people, located in the picturesque Andes highlands about 130 miles south of Quito, relies heavily on agriculture and livestock, including crops like corn, beans, onions and potatoes, and animals such as chickens, cows, rabbits and guinea pigs.

The community's primary drinking water source is a spring on the slopes of a mountain adjacent to the inactive Chimborazo volcano. Water flows by gravity to storage tanks at the base of

the mountain before being distributed to residents.

However, during the dry season, the spring's flow is insufficient to meet the community's needs. Additionally, sediment and clogging issues in the distribution system have caused concerns about water quality.

Although an alternative water source higher in the mountains has been identified, its heavy sediment load makes it unsuitable for drinking.

## Assessing the situation

This summer, a dedicated team from Trine University will travel to Tuntatacto to assess the situation and collaborate with the community.

During the visit, students and faculty will survey the existing water system, perform water quality and flow rate tests, evaluate the conditions of current and proposed water catchment systems, and investigate the feasibility of developing a sustainable new water source.



# Department News

## Six Trine University civil engineering students receive APAI scholarship

The APAI Scholarship Program is a fantastic initiative that awards scholarships to students studying construction management, civil engineering, and construction engineering management at six partner universities across Indiana. These universities include Trine University, Indiana State University, Purdue University Indianapolis, Rose-Hulman Institute of Technology, Purdue University, and Purdue University Northwest. The program aims to promote Indiana's asphalt industry as a great place to work.

To receive an award, students must complete an in-person interview with members of the Scholarship Committee. The funding for these scholarships primarily comes from APAI events such as the Shooting



*Pictured: Annalise O'Daniel, Jacob Ferguson, Daphne Bush. Not pictured: Lizbeth Avenier, Kevin Boncaro, Cristian Wong-Ranos.*

for Scholarships sporting clays fundraiser, a raffle at the APAI Winter Conference, the Trine University Golf Outing, and endowed funds from the NAPA Educational and Research Foundation provided by Indiana member firms and individual donors. In 2024, APAI awarded \$42,000 in scholarships to deserving young men and women. The ultimate goal of the APAI Scholarship Program is to engage and attract Indiana's highly qualified college students to a career in the state's thriving transportation industry.

## Trine inducts 56 into Order of the Engineer

Fifty-six students in Trine University's Allen School of Engineering and Computing were inducted into the Order of the Engineer for the 2024-2025 academic year.

A ring ceremony was held December 4 and April 23 celebrating the public induction of candidates into the Order of the Engineer, a fellowship of engineers who are trained in science and technology and dedicated to the practice, teaching or administration of their profession.

# Department News

During the ceremony, engineering students are invited to accept the Obligation of the Engineer and a stainless steel ring is placed on the smallest finger of the working hand. The obligation is a formal statement of an engineer's responsibilities to the public and to the profession. Both the order and the obligation serve to stimulate public recognition by engineers of two basic principles: that the primary purpose of the engineering profession is the protection of the public health, safety and welfare; and that all members of the engineering profession share a common bond.

Trine University conducted its first ring ceremony in November 1978.



*Pictured above: spring Civil Engineering inductees Daphne Bush, Sophia Aschemeier, Emma Beyer, Trenton Round, Lauryynn Wieland, Erin Downing.*

# Department News

## Trine teams compete at annual ASCE Symposium

Students and faculty from Trine University's Reiners Department of Civil and Environmental Engineering traveled to the University of Notre Dame for the annual American Society of Civil Engineers (ASCE) Indiana-Kentucky Student Symposium, with two Trine teams finishing in the top three of their respective events.

The university placed second in the 3D-printed bridge competition and third in surveying.

Trine teams also participated in balsa bridge, mystery design, construction institute, Mead Paper, trivia and concrete cornhole competitions.

The Symposium was held April 3-5. Eleven Trine students participated along with faculty mem-

bers Tim Tyler, Ph.D., professor, and TJ Murphy, assistant professor.

### 3D-printed bridge

In the 3D-printed bridge competition, students designed and printed bridge components that had to be assembled for the competition.

Bridge pieces had to fit inside an 8.7-by-8.7-by-6.5-inch box, with the assembled structure spanning a 20-inch gap.

Teams were judged on the time to assemble the bridge, load capacity and efficiency, defined as the load carried divided by the bridge's weight.

Luke Weintz, from Fairfield, Ohio, said he chose the event because he has been interested in 3D printing since he learned

how to do it in high school.

"I had the opportunity to work with (department chair) Dr. Gary Greene on this project, and it was a great opportunity to learn a lot of new skills," he said.

Weintz and his teammate, Derek Maag of Ottawa, Ohio, spent a couple of months designing 3D-printed beams of various sizes and designs.

Their final product had the highest strength-to-weight ratio, holding 70 pounds while weighing just under 300 grams, and the best vertical stiffness, bending only 0.085 inch downward while holding 25 pounds.

"I'm very proud of how we did and already have plans to improve the design next year," Weintz said.

# Department News

year and years to come.”

Dulle agreed, “The symposium is a great experience, and I hope all current and future civil engineers would be interested in experiencing it in person.”



Pictured above (front) : Annalise O’Daniel, Brody Fox, Logan Hooley.

(back): Tim Tyler, Dillan Cooper, Blake Dule, Luke Weintz, Derek Maag, Evan Seacatt, TJ Murphy.



*Trine University civil engineering majors Derek Maag, left, and Luke Weintz placed second in the 3D-printed bridge competition at the annual American Society of Civil Engineers (ASCE) Indiana-Kentucky Student Symposium.*



*Trine University civil engineering majors Derek Maag, left, and Luke Weintz placed second in the 3D-printed bridge competition at the annual American Society of Civil Engineers (ASCE) Indiana-Kentucky Student Symposium.*

# Department News

## Surveying

Weintz also was part of the surveying team, along with Evan Seacatt of Miamisburg, Ohio, Dillan Cooper of Seymour, Indiana, and Blake Dulle of Edon, Ohio.

"I took a surveying course in the fall semester and really enjoyed it. I think that this was a great opportunity to further the skills I learned in the classroom," Weintz said.

In the surveying competition, students gave a presentation about a topographic map they developed prior to the symposium.

"The process was to add our data points and create the surface with proper color gradients, triangular irregular networks and labeled features," Dulle said.

"We redesigned last year's plans for a new layout with legends

and a title page to create plans as professional as possible."

They also completed four surveying tasks in the field the day of the competition.

"We decided to complete the easier events first, which were differential leveling and pacing. We applied concepts learned in lab to complete both," Dulle said. "Finding a sewer cut along a centerline offset was a bit of a conceptual challenge. We set up near the middle of the sewer, measured the height of our instrument from a known benchmark, and found all elevations of stakes along the sewer."

"The construction layout was the most difficult. We used an established reference line to measure angle offsets from said line and distances to our

starting point and we did the same with a second point. From our starting point we finished placing iron pins for corners of the proposed structure."

"Dillan Cooper was the star of the construction layout event, with a great way to calculate the needed angles," he added.

## Foundation for the future

Annalise O'Daniel, an Indianapolis student who is president of Trine's student chapter of ASCE, said she was glad to see the teams experience success and enjoy being part of the Symposium.

"Seeing the students get excited and have such a great time really made it all worth it," she said. "Since we had a majority of underclassmen students this year, I think this event has sparked excitement for next

# Department News

## Civil Engineering capstone projects

### Angola Water Line Replacement

**Members:** Cayden Smith  
Nicolas Squillacioti  
Ashton Still

**Advisor:** T. J. Murphy  
**Sponsor:** City of Angola

The City of Angola requested a replacement of an aging water main along Calvary Lane. The City engineers also requested: 1) adding new sidewalks for pedestrian safety and 2) redesigning the existing road, which is also nearing the end of its service life. The project required surveying, pavement design, stormwater drainage analyses, and developing a base map and a set of construction plan and profile drawings for the roadway. A railroad crossing along the road provided unique considerations.



From left, Nicolas Squillacioti, Cayden Smith, Ashton Still.

### EPA Campus RainWorks Challenge

**Members:** Emma Beyer  
Erin Downing  
Sydney Kalinger

**Advisor:** T. J. Murphy  
**Sponsor:** Trine University  
United States Environmental  
Protection Agency

The Campus RainWorks Challenge is a green infrastructure design competition for American colleges and universities. It seeks to engage with the next generation of environmental professionals, foster a dialogue about the need for innovative stormwater management techniques, and showcase the environmental, economic, and social benefits of green infrastructure. The Capstone students worked with Trine administration and staff to design sustainable stormwater infrastructure for the ongoing campus growth. The students also created an educational video to highlight their designs.



From left, Sydney Kalinger, Erin Downing, Emma Beyer.

# Department News

## Harcourt Road & Wohlert Street Roundabout

**Members:** Landon Barrow  
Rylan McBride  
Ethan Spahr  
Laurynn Wieland

**Advisor:** Jeremy Rentz, Ph.D.

**Sponsor:** Trine University -  
Reiners Department of  
Civil and Environmental  
Engineering

The intersection of Wohlert Street and Harcourt Road in Angola, Indiana faces inefficiencies, safety issues, and inadequate pedestrian infrastructure. This project proposes a single-lane roundabout to improve traffic flow, reduce crashes, and integrate sustainable practices. Using traffic data and modeling, the design follows INDOT and FHWA guidelines. Key features include rain gardens, permeable pavers, and LED lights for low-impact development. Expected outcomes are enhanced safety, reduced delays, and environmental benefits through sustainable urban infrastructure.



From left, Ethan Spahr, Landon Barrow, Rylan McBride, Laurynn Wieland.

## New Angola Salt Storage Building

**Members:** Ryan Gienger  
Brendyn Lima  
Cristian Wong-Ramos

**Advisor:** T. J. Murphy

**Sponsor:** City of Angola  
Street Department

This project was to design a new salt storage facility for the City of Angola Streets Department to meet the city's growing needs for winter road maintenance. The facility will replace outdated wooden structures and was designed to accommodate future city growth. The design incorporated enhancements for operational efficiency, such as widening the driveway to accommodate future truck traffic. Stormwater management was addressed with the integration of a vegetated swale adjacent to the site, which promotes natural infiltration.



From left, Ryan Gienger, Cristian Wong-Ramos, Brendyn Lima.

# Department News

## New Trine Student Design Center

**Members:** William Burba  
Trenton Round  
Maxwell Somerfield  
**Advisor:** T. J. Murphy  
**Sponsor:** Trine University

Trine University plans to build a new Student Design Center (SDC) to have a larger and more versatile facility than the existing SDC. At the start of this project, the location of the new SDC was undetermined, so for this project, students designed a new, larger facility, at the location of the existing SDC. The project required surveying, structural analysis and design, foundation design, stormwater management, and site planning.



From left, Trenton Round, Maxwell Somerfield, William Burba.

## State Road 827 Multipurpose Trail

**Members:** Sophia Aschemeier  
Timothy Bohlman  
Christopher Gault  
Fatima Rodriguez  
**Advisor:** T. J. Murphy  
**Sponsor:** Steuben County

This project was the comprehensive design of a 6-mile multi-use trail connecting Angola and Fremont along State Road 827. The trail addresses the critical need for safe, non-motorized pathways in Steuben County. This trail will enhance community connectivity, promote active lifestyles, and support environmental sustainability. The design included surveying and creating a base map, pavement design, site development, and stormwater management. The project also required the analysis and design of extensions to the existing stormwater culverts underneath the road.



From left, Christopher Gault, Sophie Aschemeier, Fatima Rodriguez, Timothy Bohlman.

# Department News

## Summit Street Dormitory

**Members:** Daphne Bush  
Ryan Hoak  
Evan Holman  
Aaron Loos  
Reece Soel

**Advisor:** Jeremy Rentz, Ph.D.

**Sponsor:** Trine University -  
Reiners Department of Civil  
and Environmental Engineering

Trine University's growing enrollment necessitated the design of a 316-bed dormitory featuring residential and public amenities, including a gym, study areas, and Grab 'n Go dining. This four-story, steel-framed structure includes a skylight-lit atrium, stormwater systems with pervious pavement and off-site conveyance, helical pier foundations, and efficient site grading. Using RISA3D and Civil 3D, the team optimized structural stability, drainage, and layout while adhering to ASCE and IBC standards. The project enhances campus infrastructure and supports future growth.



From left, Aaron Loos, Daphne Bush, Reece Soel, Ryan Hoak, Evan Holman.

## Zollner Golf Course: Hole 9 Redesign

**Members:** Kevin Boncaro  
Mason Fritch  
Kamron Hill  
Austin Smith

**Advisor:** Jeremy Rentz, Ph.D.

**Sponsor:** Trine University -  
Reiners Department  
of Civil and  
Environmental  
Engineering



From left, Kevin Boncaro, Mason Fritch, Austin Smith, Kamron Hill.

Frequent flooding on Hole 9 of Zollner Golf Course disrupts playability. Our project redesigned the pond with a reinforced retaining wall to increase storage capacity and added an overflow system to handle excess water. A rain garden near the tee box manages runoff and supports local ecosystems. Soil testing revealed poor drainage, guiding our design decisions. By using native plants and sustainable materials, we reduced environmental impact and maintenance needs. This redesign improves drainage, enhances playability, and promotes long-term sustainability.

# Department News

## Senior golf

On Thursday, May 1st, faculty and spring graduates gathered at Zollner Golf Course to mark the end of the semester with a friendly round of golf. The event provided a wonderful opportunity for everyone to unwind and celebrate their achievements. Participants also enjoyed a delightful boxed dinner from Bon Appetit, adding to the day's enjoyment and camaraderie.



# Department News

## Celebrating excellence in civil and environmental engineering

On April 22<sup>nd</sup>, a catered dinner was held to honor the spring graduates of the Civil and Environmental Engineering program. The event was a memorable occasion, filled with joy and pride as students, faculty, and staff gathered to celebrate the achievements of the graduating class.

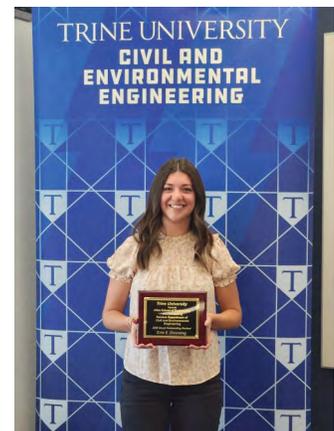
Special recognition was given to the following award recipients:

- **Evan Holman:** Cecil Hauber Civil Engineering Leadership Award
- **Annalise O’Daniel:** The Hayden ASCE Service Award

Congratulations to all the graduates and award recipients for their hard work and dedication. We wish them continued success in their future endeavors.



*Daphne Bush*



*Erin Downing*

- **Daphne Bush:** The Kunti and Satish Goyal Outstanding Civil Engineer Award
- **Erin Downing:** The Kunti and Satish Goyal Outstanding Civil Engineer Award
- **Evan Holman:** The Kunti and Satish Goyal Outstanding Civil Engineer Award



*Annalise O’Daniel*



*Evan Holman*

# Alumni News

## Ethan Spahr leads Thunder to 2025 MIAA men's outdoor track and field championship

Ethan Spahr, 2025 graduate helped the Thunder to the 2025 MIAA Men's Outdoor Track and Field Championship title. Spahr scored 53 points all coming from field events. Spahr was recognized for winning the first ever men's decathlon at the MIAA Combined Events Championship. To follow that, he finished first in the long jump (6.93m), first in the pole vault with a new personal record of 4.60m, and first in the javelin with a new PR of 53.04m. He also finished second in the high jump (1.98m) and fourth in the triple jump with a new personal record of 13.63m. Spahr is currently ranked seventh in the nation for the decathlon.

Spahr concluded his career as a two-time NCAA qualifier and the program's all-time leader in MIAA Championships points. Spahr holds program records in the decathlon, heptathlon, indoor high jump, and indoor triple jump. He ranks second in the indoor and outdoor long jump, third in the indoor pole vault, outdoor high jump and triple jump. He is fourth in the outdoor pole vault and javelin throw, seventh in the 110-meter hurdles, and eighth in the 60-meter hurdles. Spahr

also owns the MIAA meet record in the decathlon. Spahr earned 205 conference points during his career and was also a three time Academic All-American.



# Alumni News

## Iceland adventure

Arthur Greenman, Civil Engineering Class of 1966, had the incredible opportunity to spend 14 days driving around Iceland with his youngest son's family. The island's natural beauty is truly breathtaking, from its stunning landscapes to its majestic waterfalls. The people of Iceland are exceptionally friendly, and it was a pleasant surprise to find that they all speak English, making communication a breeze.



# Alumni News

## Rediscovering surveying on Pikes Peak

Austin Zank and Aspen Fisher took a trip to Colorado and embarked on a memorable hike up Pikes Peak. During their adventure, they stumbled upon a Benchmark, which instantly brought back fond memories of their surveying class with Professor Kim Greene in the Fall of 2020.

Austin and Aspen wanted to share some of the pictures they took during this nostalgic moment. It was a wonderful reminder of the foundational skills they learned and the experiences that shaped their professional journeys.



# Alumni News

## **From undecided to unstoppable: A civil engineering alum's path to the deep waters of the Gulf Coast**

Cameron Horan's journey to becoming a drilling engineer for BP, while simultaneously pursuing a Ph.D. in mining and mineral engineering, is a story of determination, adaptability and seizing opportunities.

It all began in Osgood, Indiana, the small town of less than 1,000 people where Cameron grew up.

He always enjoyed the outdoors and activities like camping, hiking, fishing, hunting and skiing. Initially set on becoming a farmer and skipping college, Cameron found ways to use his aptitude for design and construction to benefit the family.

"Often my parents would see something they would like and I would say 'I can build that' and it would be even better quality and cheaper," Cameron explained. "I've completed many projects from building Quonset hut barns on our farm to painting murals on semi-trailers."

After encouragement by teachers and family to continue his education, Cameron decided to look into pursuing an engineering degree. With family ties to Trine—his older brother and uncle are alumni—Cameron was drawn to the university's intimate environment, which mirrored his small-town roots. The small class sizes and close-knit professor-student interactions at Trine played a significant role in his decision.

Plus, as Cameron humorously adds, "I also chose Trine for the snow. HAHA Love it!"

## **The Trine University experience**

When Cameron first set foot on campus, he wasn't sure which engineering discipline he wanted to pursue. Accepted into the general engineering program, Cameron used the first semester to explore different fields.

For students unsure about which engineering or computing major is best for them, he advises, "Keep an open mind and explore all avenues while you have the chance. Don't choose solely based on money because going to work every day hating what you do is not how you should live life. Make every decision a meaningful one!"

During this time, he discovered his interest in mining and petroleum engineering, piqued by

# Alumni News

opportunities for travel and high pay. With advice from his academic advisor, Cameron eventually selected civil engineering for his undergraduate degree.

"I chose civil engineering because I was an outdoor enthusiast and loved to build things," he recalls.

He also worked part-time for several professors within the department, forging strong connections that he cherishes to this day.

"The thing I remember most is the connections that I made with many of my professors, whom I still try to maintain contact with and stop in and visit whenever I am in the area," Cameron shares.

During his time at Trine, Cameron immersed himself in campus life, playing golf and later bowling, as well as leading several engineering-related student

groups. One standout memory from his Trine days was a week-long trip to Ecuador with Trine's chapter of Engineers Without Borders, where he helped bring clean water to a remote community in the Andes Mountains.

## **Determined to succeed**

Cameron completed his Bachelor of Science in civil engineering from Trine in May 2019. His professors strongly encouraged him to consider graduate school, but he preferred to land a job in industry.

At the time, there weren't positions available at mining and petroleum companies for civil engineering graduates, so Cameron reconsidered his options.

"If they won't hire me with a civil engineering degree, I will go get a degree that they

can't refuse," he thought.

He was accepted with a full scholarship to the University of Texas–Austin, the top-ranked university in the world for petroleum engineering. He completed his master's degree in 2021.

Following graduation again, Cameron's career journey took several more twists and turns due to the COVID-19 pandemic. Driven by the downturn in the oil market, his path began as a quarry manager for New Point Stone Company, a small quarry back in his hometown. From there, he moved to Halliburton as a plant specialist in northern Nevada, mining barite for oil fields.

Despite his efforts, Cameron realized his role at Halliburton wouldn't get him closer to his goal of working for a major oil company. So, he took a leap of

# Alumni News

faith and began working on oil rigs for Transocean in the Gulf of Mexico, doing the grueling blue-collar work of a roughneck/floorhand on a drillship. This daring decision paid off when BP recognized his determination and hired him as a drilling engineer.

## **Dream come true**

Working on offshore rigs is not for the faint of heart. Cameron has spent weeks at a time on drillships, enduring the extreme conditions of a three-week-on, three-week-off schedule, working 12-hour shifts around the clock.

"It is a very unforgiving place," he explains, recounting experiences ranging from surviving hurricanes to working in 150-degree temperatures on deck while suited up in fire retardant coveralls and other extensive protective gear.

"Mistakes are generally not

tolerated, as it can mean the difference between life and death," he said. "These operations cost over \$1 million a day, so efficiency is key, and downtime is not preferred."

Cameron credits much of his success to the solid foundation he built at Trine. The coursework in material properties, statics, fluids, dynamics and foundation design has been essential in his current role.

"We work with many different materials, and we need to understand forces and material properties," he commented. "Like in civil engineering, the consequences in petroleum engineering can be devastating to people and the environment. We have to hold ourselves to a higher level of accountability."

Cameron's favorite part of his

his job at BP is experiencing the incredible engineering feats involved in drilling wells over 30,000 feet deep in water depths of up to 12,000 feet.

"The engineering solutions are extraordinary," he raves.

He also enjoys the unique experience of flying by helicopter to work 100 miles offshore and witnessing the beauty of nature and wildlife in the open ocean.

Despite the grueling schedule, Cameron decided to add in another challenge during his off weeks – flying to Canada to pursue a Ph.D. in mining and mineral engineering from McGill University. The decision to pursue the ultimate advanced degree was partly fueled by his desire to diversify his expertise. His research at McGill focuses on mineral processing, tracking sub-atomic particles to understand what occurs inside float

# Alumni News

cells, large containers used to separate minerals from other materials.

"This knowledge can help us improve mineral recovery rates and improve design of float cells," explained Cameron.

His research team plans to use this information to build different float cell designs and test them at mining processes across the globe, such as London, England, and Cape Town, South Africa.

## Returning to his roots

Despite his extensive experience and academic achievements, Cameron remains humble about his future. "I have no clue," he admits when asked about his long-term career plans. "I'm planning on having a family and I want to start my own business. I grew up with blue-collar entrepreneurial parents and it's in my DNA."

As a child he always had several answers to the question of what he wanted to be when he was older and now knows the possibilities are endless.

"I realized that God has different plans for my life and no matter how much I think I know, things seem to always change direction," he noted.

Cameron plans to continue looking for opportunities that include innovative hands-on projects, outdoor travels and time spent with his family.

From uncertain beginnings to drilling deep in the Gulf of Mexico, Cameron's journey is far from over. Wherever the next chapter takes him, one thing is certain: His passion for engineering and adventure will continue to guide his path.



# Alumni News



*Cameron's favorite part of his job at BP is experiencing the incredible engineering feats involved in drilling wells over 30,000 feet deep in water depths of up to 12,000 feet.*

*Cameron Horan flies by helicopter to work 100 miles offshore.*



# Alumni News



Alex Duran, 2020 graduate, was awarded the Young Member Engineer of the Year by the American Society of Civil Engineers Indiana Section.



Megan (McElroy) Slipher, a 2011 graduate, has had a dynamic and accomplished career in engineering and project management. She and her husband were married in October 2013 in Indianapolis and spent the past 11 years living and working in the Bowling Green, Ohio area. They are proud parents to two children—Daniel (8) and Elizabeth (5). At the end of 2024, the Slipher family returned

to Indianapolis to be closer to loved ones.

After graduating, Megan began her career with the Indiana Department of Transportation (INDOT) in Indianapolis. During her first year, she completed the Graduate Engineer Development Program (GEDP), gaining valuable experience across various departments. She then served as the Assistant Asphalt Engineer for nearly a year before relocating to Ohio.

In Ohio, Megan joined Sigma Technologies in Perrysburg, where she spent nine years excelling as a Designer,

Project Supervisor, and Front-End Subject Matter Expert in telecommunications design engineering. From mid-2022 through the end of 2024, she worked at SSOE Group in Toledo as an Assistant Project Manager in the Manufacturing department.

Now back in Indianapolis, Megan has returned to her telecom roots, joining Farnsworth Group. Her journey reflects a strong commitment to professional growth and family, and we're proud to celebrate her accomplishments.

# Alumni News

## **Always ready: Trine grad following call to serve in Coast Guard**

Quinn O'Brien enjoyed working as a bridge engineer after graduating from Trine University, but knew his destiny was elsewhere.

"Both grandparents and my father served in the Army, and I always had an interest in the military when I was growing up," he said. "I always knew I would regret it if I never made the decision to serve."

After researching different branches and hearing from veterans, he enlisted in the U.S. Coast Guard.

"What really drew me toward the Coast Guard was the mission of protecting the U.S. at home, the fact that the Coast Guard is doing their mission every day, and the do-more-with-less mentality,

" he said. "There is a lot of responsibility as well as opportunity that you inherit early on in the Coast Guard."

He is currently a seaman working on a buoy tender in Portsmouth, Virginia.

"We service hundreds of buoys in the Chesapeake Bay. I work on the Deck department helping to service the buoys when we go underway and keep the ship clean and in good working order," he said.

"It's hard, honest work, but it's really rewarding knowing that we are impacting the surrounding waters. Millions of tons of cargo on ships come through the nearby ports. They wouldn't be able to safely navigate without the work we do."

He plans to attend a school later this year and graduate

as a Maritime Enforcement Specialist (ME). From there, he hopes to get into some of the more specialized units in the Coast Guard performing counter-narcotic and counter-terrorism law enforcement.

"I plan on serving for 20 years," he said. "After that I do not know what I'll do. For now, I'm just focused on the next step in the path."

Quinn decided to study civil engineering at Trine after talking with his uncle, who works closely with structural engineers.

"He was describing all the amazing things they are able to accomplish on a daily basis," he said. "I was fascinated just listening to him and knew I wanted to pursue a degree related to structural engineering."

He still relies on the life skills he learned at Trine in the Coast Guard.

# Alumni News

"Critical thinking is a must when we are working difficult scenarios with heavy machinery," he said. "The most important skill I learned at Trine was how to learn. There is a ton of material to read and a lot of qualifications you are required to get when arriving at your first unit. My time at Trine helped me develop the skills to learn quickly and effectively and translate that knowledge into my everyday work."



# Graduates

## Fall 2024 Graduates



**Landon Barrow**



**Aaron Loos**



**Chris Parker**



**Austin Smith**

## Spring 2025



**Sophia  
Aschemeier**



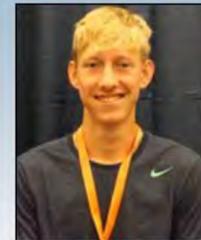
**Emma Beyer**



**Tim Bohlman**



**Kevin Boncaro**



**William Burba**



**Daphne Bush**



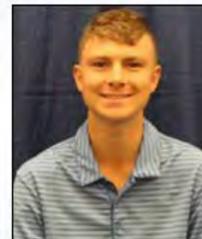
**Erin Downing**



**Mason Fritch**



**Christopher Gault**



**Ryan Gienger**



**Kamron Hill**



**Ryan Hoak**



**Evan Holman**



**Sydney Kalinger**



**Brendyn Lima**



**Rylan McBride**



**Fatima Rodriguez**



**Trenton Round**

# Graduates

## Spring 2025



**Cayden Smith**



**Reece Soel**



**Max Somerfield**



**Ethan Spahr**



**Nicolas Squillacioti**



**Ashton Still**



**Laurynn Wieland**



**Cristian Wong-Ramos**

## Milestones

If you would like to share information about an exciting project you recently worked on, a dream vacation you took, or a special occasion you celebrated such as an anniversary or family addition, please email Sheri Thomson. The department would like to include it in the next newsletter. Pictures are also welcome!

Sheri Thomson  
ssthomson17@trine.edu  
(260) 665-4263

## Post a job or internship opening

Handshake is Trine University's gateway to jobs, career opportunities, career events and more! Handshake users have the ability to explore and find job and internship opportunities. For more information, please visit: <https://www.trine.edu/career-services/index.aspx>

Employers can visit <https://trine.joinhandshake.com/emp>

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ADVENTURE  
WHEN YOU ARE A  
CIVIL ENGINEER



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