

Our Blueprint for Success

The Department of Geological and Environmental Sciences at Western Michigan University is a dynamic and student focused community dedicated to understanding Earth systems and addressing real world environmental challenges. Our programs emphasize experiential learning through field work, laboratory analysis, and applied research, giving students the skills and confidence needed to succeed in a wide range of geoscience careers.

Building a Legacy.

This year, we're excited to share a behind-the-scenes look at the projects and people shaping our legacy. From groundbreaking new developments to incredible student success, this edition is dedicated to keeping you informed on the dirt that matter most.

Our faculty are nationally and internationally recognized scholars and practitioners who bring cutting edge research and professional experience directly into the classroom. Through strong partnerships with industry, government agencies, and community organizations, students gain exposure to current practices and emerging needs across the geoscience workforce.

Our alumni form the foundation of the department's impact and reach. Graduates of Geological and Environmental Sciences at WMU are leaders in consulting, industry, education, research, and public service across the country and beyond. This newsletter celebrates their achievements, highlights ongoing departmental work, and strengthens the connections that keep our community grounded, engaged, and moving forward together.

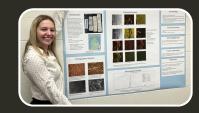
Inside:



WMU G&ES Celebrates 60 Years of Excellence



Discover Our Latest Research



Student and Alumni Achievements



Greetings from the Department Chair Dr. Heather Petcovic

With a new President, Russ Kavalhuna, an uptick in undergraduate enrollment, and a jump in external funding to just shy of \$60 million, WMU is going strong – and so is the department!

- GES Undergraduate enrollment grew to 56 students across seven majors and Graduate enrollment increased to 33 MSc and PhD students
- Our faculty, staff, and students earned myriad major national and university awards
- Research productivity expanded with more than 20 publications, many led by students and we secured 10 new external grants and contracts, with more than \$500k of that directly supporting student works
- Over \$30,000 awarded in GES student scholarships
- Graduated 20 new Geo Bronco alumni with 91 percent of graduates employed or continuing education in their field
- Reconnected with 80 alumni, friends, and emeritus faculty at our 60th anniversary celebration (see photo of emeritus faculty on right (Drs. Barnes, Schmidt, Chase, Sauck, and Straw). Thank you to the 60th planning committee: Kim Steinmann (chair), Richard Laton, Sara Pearson, Bill Steinmann, Linda Zabik, Lisa Phillips, Jerry Aiken, John Yellich, and Tom Howe for your work on the event; John Yellich, Bill Harrison, and Robb Gillespie for organizing the wine tour; Paul Goudreault for the video; and WMU Alumni Association Event Management staff Shannon Devries and Lizzy Verduzco for all of the behind-the-scenes work.

Click here to view the video and slideshow from the event!

Congrats, Dr. Timi Popoola!



Beyond the numbers, the past year highlighted the department's strong culture of community, support, and belonging. Field experiences, shared academic challenges, and time spent together in Michigan's demanding weather help students build deep and lasting friendships and feel that they have truly found their place. These connections extend through important milestones as well, including the recent doctoral hooding of Timi Popoola, which underscored the pride and continuity within the department. That sense of life long connection was also evident at the 60th anniversary celebration, when alumni returned from across the country to reconnect. Looking ahead, the department will continue to strengthen the Geo Bronco community through new facilities, new courses, and ongoing fundraising efforts.



DR. DAN CASSIDY

The Hydrogeology group at WMU continues to thrive, led by an outstanding cohort of recent graduate students including Marwan Al Hinaai, Ethan Coffin, and Donovan Vitale. Their work has produced multiple publications on chloride contamination from road salt and PFAS in surface water and groundwater, with applications from pilot scale treatment at Asylum Lake to contamination history reconstruction at Wurtsmith Air Force Base, in collaboration with Matt Reeves. The program looks ahead to a strong incoming graduate cohort and continues to support students through core coursework and leadership of the Hydrogeology Certificate Programs.



Digging into what comes next

Dr. Cassidy is advancing research on PFAS and other emerging contaminants in groundwater and surface water, building on ongoing work in contaminant fate and transport, innovative sampling, and reconstruction of contamination histories with clear environmental and public health relevance. Prospective graduate students in hydrogeology and environmental geochemistry are encouraged to connect, with opportunities to work on externally funded projects, collaborate with agency and industry partners, and develop in demand field and laboratory skills, particularly in PFAS focused research.

The future is taking shape



Job opportunities in hydrogeology remain strong, with graduates finding positions in environmental consulting, engineering firms, government agencies, and water utilities across the country.

Employers continue to seek candidates with solid field experience, data analysis skills, and familiarity with groundwater modeling, contaminant transport, and regulatory frameworks. Alumni working in hydrogeology are encouraged to stay connected, share job openings, and help mentor the next generation of WMU GeoBroncos entering this growing and impactful profession.



DR. MINE DOGAN

The Near Surface Geophysics Lab continues to grow and stay active on multiple fronts. Since last year, the lab has welcomed two new MSc students, Everett Armbruster and Bryan Dillon, who have quickly become integrated into ongoing research and field activities. As the lab looks ahead, we are also celebrating the success of Chanho Park, who is nearing graduation and recently accepted a geophysicist position in Atlanta, relocating in September to begin his new role. Brandon Tulban has been further strengthening the lab's technical capacity by taking advanced coursework in electronics and circuits to support the design and construction of geophysical instrumentation.



On the Horizon

Team based research and applied fieldwork remain central to the lab's mission. Over the past year, the group continued its close collaboration with the WMU Cold Case Program and the Michigan State Police, completing field investigations on several cold cases during the summer. Additional projects took the lab across Michigan and into California, including geophysical mapping at Westedge Cemetery, delineation of sand and gravel aquifers in Northwest Michigan, and extensive testing of newly developed survey rigs. These new vehicle and boat mounted platforms allow VLF EM and magnetic gradiometer surveys to be conducted more efficiently, enabling rapid data collection over larger areas while maintaining high spatial resolution.

In the Works



Looking ahead, the lab has received exciting new external support with the approval of a Department of Defense funded project in collaboration with Penn State and the Cold Regions Research and Engineering Laboratory. This multi year effort will focus on investigating legacy waste sites in Alaska, with the first of six planned field campaigns currently in development.



Using the lab's airborne electromagnetic system, the team will map leachate movement in groundwater and examine the impacts of permafrost freezing and thawing cycles, expanding both the scientific reach and real world applications of near surface geophysics research at WMU.



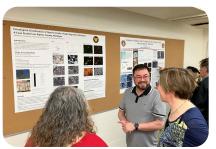
DR. STEPHEN KACZMAREK

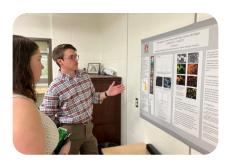
After 10 years at WMU, I was fortunate enough to be promoted to the rank of what a colleague refers to as "fool full professor", and while that's a nice dollop of frosting on the cake, what I am most proud of is my team of talented graduate students (see team photo above), and our shared commitment to gather socially to eat boatloads of tacos (see photo below). The teaching and research are still going very well, and both source immense professional gratification in my daily life. In teaching, I continue to enjoy mentoring students through hands on, experiential learning. In Advanced Earth Materials, students used analytical instruments in my lab to collect petrological data from a Michigan Basin core and presented their results as conference style posters at the annual Geoscience GeoBoree. This approach helps students think like scientists, learn more deeply by doing, and build confidence and pride as they grow from geoscience students into geoscientists.

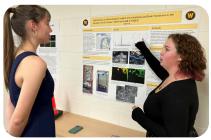


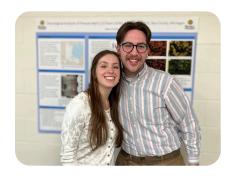
Student Research Showcase Showdown -GeoBoree 2025











Experiential Learning

Experiential learning again took us on the road for our annual Sed Strat field trip to Kentucky, which continues to highlight the transformative power of field based geoscience education. Field trips distinguish our discipline by pairing rigorous, hands on learning with time outdoors, where students sharpen their observational skills and gain a deeper appreciation for the complexity of Earth systems. The field also challenges students to confront and work through misconceptions, while shared experiences in vans, campsites, and around the campfire help build strong connections. These trips are a rite of passage that strengthen community, create lifelong friendships, and provide a more authentic and lasting understanding of our planet.

The CPCL lab proudly celebrates the continued success of its alumni, whose accomplishments reflect the strong foundation and trailblazing spirit fostered at WMU. Recent graduates have advanced into prominent roles across industry, academia, and research, including positions at Chevron, Yale University, the University of Hawaii at Mānoa, Los Alamos National Laboratory, Texas A&M, Reefworks, DTE Vantage, and doctoral programs at Arizona State University and the Colorado School of Mines. Their achievements highlight the broad impact and lasting value of a WMU geoscience education.

100% Student placement in the Geosciences >\$30,000 In student scholarships last year >70%
Of students do research during their degree

>\$10.8M In research funding Over past 3 years



Learning the ropes IN THE FIELD









Carbonate Petrology and Characterization Lab (CPCL)

The CPCL team continues to lead in carbonate petrology, publishing in top journals, securing external funding, earning awards, and presenting at conferences. I'm proud to work with such a talented and dedicated group. Here are some student updates:

Ashley Scott PhD is completing her dissertation and publications on the Ordovician Saluda Formation, presented at GSA Connects, and will graduate next spring before continuing with the Michigan Geological Survey.

Ariel Martin PhD is finishing NSF funded research on oxygen isotope fractionation in dolomite, with one recent publication and two more in progress. She will defend in the spring and move to a postdoctoral position at the University of Wyoming.

Nathaniel Ferrill PhD continues research on Silurian Byron Formation dolomites in the Michigan Basin, presented recent results at GSA Connects, and teaches Earth Materials courses.

Saeed Norouzi PhD is advancing research on Triassic dolomitization in Iran, showing geochemical signatures may be altered during recrystallization, while teaching multiple core courses.

Maryam Saleem PhD is in her second year and making strong progress on an industry funded study of Smackover Formation diagenesis, supported by a WMU Doctoral Scholar Fellowship.

Moira Burns MS and Max Copus MS are working on DOE funded CCUS projects in the Michigan Basin, with Moira presenting at GSA Connects and planning to graduate next spring, and Max returning from a DTE Energy internship to complete his thesis.

Mallory Price MS joined from Ohio State University and will begin her MS research in the spring, focusing on petrological characterization of Michigan Basin sedimentary rocks.



36th Year of Hydrogeology Field Camp at WMU

The WMU Hydrogeology Field Camp is an immersive, hands on program where students gain practical experience in groundwater and surface water systems. Participants conduct field investigations, including well logging, aquifer testing, water quality sampling, and geologic mápping, while applying hydrogeologic principles in real world settings. The camp emphasizes experiential learning, professional skills development, and teamwork, preparing students for careers in environmental consulting, water resources management, and related geoscience fields.





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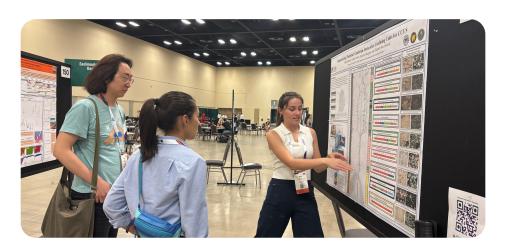
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DR. MATT REEVES



It has been a highly productive year for our research group, with major milestones and expanding projects. Dr. Ethan Coffin and Donovan Vitale defended their degrees, advancing PFAS research—Ethan's work on foam fractionation and novel harvesting devices yielded publications and pending patents, while Donovan developed the first conceptual model of PFAS enrichment in surface water foams and continues at Cornell. Together with Mark Henry, Dr. Dan Cassidy, and myself, we progressed a manuscript using tree cores to reconstruct past PFAS contamination, to be presented at the Great Lakes PFAS Summit. We also welcomed Marlayna MacKay to expand PFAS research in Michigan lakes, supported by MGS and a statewide foam sighting survey that has already generated over 80 reports.



Our team has advanced several ongoing projects, including studies on PFAS in biosolids and vegetation, contaminants from textiles, and emerging wastewater pollutants. Alumni and students continue to excel: Marwan Al Hinaai published on chloride removal and joined Kieser & Associates, while Kristen Hasbrouck and Katie Strohauer study PFAS fluxes, groundwater contamination, and statewide water chemistry. Justin Honer has been highly productive, developing novel models of volumetric contraction with multiple manuscripts in progress.

On a personal note

Our family has embraced the empty nest stage, with Zoe at Albion University and Ellie at the University of Michigan, both pursuing pre-med biochemistry. This year reflects the depth, innovation, and collaborative spirit of our team, and we look forward to building on this momentum in the year ahead.



DR. MOHAMED SULTAN

Earth Sciences Remote Sensing (ESRS) Facility

A Vibrant Team Driving Interdisciplinary Research

The ESRS Facility at WMU is home to eleven talented PhD students and Senior Research Scientist Mustafa Kemal Emil. Together, they conduct cutting-edge research in geology, hydrogeology, tectonics, environmental sciences, and informatics, supported by NASA programs (GRACE, EMIT, Earth Surface and Interior), King Saud University, and the Qatari Ministry of Municipality.

Major Publications and Global Impact

This year, the team published five manuscripts, including three in Nature Communications Earth & Environment. Key contributions include studies on climate change impacts on cyclones and aquifer recharge in Oman, flood management strategies in the Nile Basin, extreme precipitation in central Arabia, and structural modeling of mega depressions. Thirteen abstracts are scheduled for presentation at the AGU Annual Meeting, and several senior PhD students are set to graduate in 2025–2026.

Expanding Horizons with New Researchers

New members Alaa Hawamdeh, DhaifAllah Alsalem, Doaa Hegazy, and Rami Mansouri have joined the group, focusing on drought impacts in the Nile Basin, groundwater flow in the Harrat Rahat basaltic aquifer, and hydrological and mineral exploration.

Recognitions and Awards

ESRS team members earned numerous honors, including GSA and AAPG Graduate Student Research Grants, the Climate Change Graduate Research Scholarship, and the 2025 Distinguished Faculty Scholar Award. These accolades highlight the team's exceptional contributions to advancing Earth science research globally.

Training, Collaboration, and Professional Development

Beyond research, ESRS emphasizes skill development and knowledge sharing. Team members led workshops for Saudi Geological Survey geologists, attended international seminars on spectral geology and remote sensing, and participated in advanced training programs on Open Science, GRACE data processing, and AI applications in hydrology. These efforts enhance technical expertise while fostering collaboration and building capacity within the broader scientific community.

Looking Ahead

With ongoing projects and a strong team of emerging researchers, the ESRS Facility continues to push the frontiers of remote sensing and Earth systems research, translating cutting-edge science into real-world solutions and global impact.

A Year of Innovation and Impact





The Earth Science Remote Sensing Lab celebrates Dr. Mohamed Sultan's receipt of WMU's Distinguished Faculty Scholar Award, the University's highest faculty honor. The award recognizes his sustained and internationally recognized contributions to hydrology, geoscience, and satellite remote sensing, particularly his pioneering work on groundwater systems and environmental change in arid regions. This distinction highlights the global impact of his scholarship and includes the formal title of Distinguished Faculty Scholar and an invited lecture to the University community.





Field Mapping class at the Quincy Mine, Hancock, MI



Sandstone Falls, Black River NF Scenic HWY



Springs feeding the Little
Ocqueoc Stream

DR. PETER VOICE

It has been a busy, productive year focused on teaching and field work. GEOS 1050 Dinosaurs enrolled over 400 students, while courses in Structural Geology, Earth History, Stratigraphy, and the new Field Geology and Geomorphology emphasized hands on, project based learning. Field activities included traditional trips to Baraboo, multi week mapping in the Upper Peninsula, and new excursions across the Keweenaw, Manistique area, Sleeping Bear Dunes, and northern Lower Peninsula, exposing students to diverse geologic systems.

Efforts included developing new field courses like the GEOS 3010–3020 sequence with Heather and Mallinson Institute colleagues, emphasizing rock description, mapping, and field safety. Summer work supported future teaching and outreach, including a Devonian stratigraphy trip and a Michigan Earth Science Teachers Association excursion. The year ended with renewed momentum in teaching, upcoming field trips, and the department's 60th anniversary celebration reconnecting alumni, mentors, and colleagues.

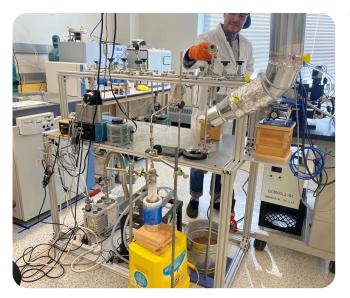


Students examining the Byron Formation at Fayette



Chase, Voice and Schmidt

DR. DAVID ZAKHAROV



The end of this semester will mark full 3 years since I have joined WMU as an assistant professor. This means that I am teaching our Physical Geology (GEOS1300) for the 6th time! My teaching portfolio now has another class – "High-temperature Rock Cycle", which is a project-based petrological course for graduate students. I am getting ready to start teaching an ig/met petrology course – something that has not been done in quite a few years as far as I can tell! Finally, I have been put in Dr. Peter Voice's shoes – I have been teaching the online asynchronous course GEOS1050 Dinosaurs. I do not have much to say with exception that it takes a lot of patience and reminders to have >300 students and >10 deadlines in a semester.



Despite the gaps in optimism these days, things have been going alright in the lab. The first person to graduate from my lab is Zack Stevens, who has earned his MS degree working on stable isotope geochemistry of Ingalls Ophiolite out in WA. Afrid and I have traveled to see Josephine Ophiolite at CA-OR border, which should help him to get a complete range of oceanic isotope values. Afrid's travel was generously supported by Christopher J Schmidt Endowment.

A wonderful outcrop featuring sediment-pillow basalt contact is featured in the attached photo. Most of our updates about the activity of the laboratory are posted on the website www.davidzakharov.com.

On a personal note

Outside of teaching and research, David Zakharov enjoys spending time outdoors and traveling to geologically interesting places, often combining his professional interests with exploration and photography. He values time with friends, family, and colleagues, and is known for building a strong sense of community through shared meals, field experiences, and informal gatherings that bring people together beyond the classroom and laboratory.





2025 Geological and Environmental Sciences Department Alumni Achievement Awardee

MR. THOMAS HANNA

Thomas Hanna is a hydrogeology industry leader, educator, and mentor with a strong commitment to global water sustainability. After six years as a precious metals exploration geologist, he shifted to hydrogeology in mining and now serves as district manager for Johnson Screens, specializing in large-capacity well design for mine dewatering, water supply, in-situ mining, and environmental remediation. He is a contributing author to Groundwater and Wells and the Water Well Journal.

A WMU alumnus (M.S., 1983), Hanna has supported the university for over a decade as a subject matter expert for the Hydrogeology Field Course, providing hands-on instruction, mentorship, and classroom resources. His expertise and dedication have had a lasting impact on students, the program, and the broader hydrogeology community.





MAKING AN IMPACT

Thom's impact extends globally, as he applies his hydrogeology expertise in water-scarce regions across Africa, South America, Asia, and Europe to improve groundwater access and promote sustainable water management. He brings these international experiences into the classroom, giving students a real-world, globally relevant perspective.

Beyond his professional work, Thom is a valued colleague and friend known for his humor and competitive spirit. He demonstrates dedication to service through the National Ground Water Association, volunteering with disabled skiers in Colorado, and maintains an active lifestyle as a hockey player, golfer, and mountain biker.



STAFF RECOGNITION

Cristine Thomas, 2025 WMU Make a Difference Award Recipient

Cristine Thomas's colleagues proudly congratulate her on receiving the 2025 Make a Difference Award, recognizing her tireless efforts, professionalism, and daily commitment to WMU. Thomas, program manager in the Department of Geological and Environmental Sciences, is celebrated for her tireless support of students and her unwavering kindness. consistently goes above and beyond, bringing energy, creativity, and care to her work, positively impacting students, faculty, and staff. She anticipates needs, supports others with patience and kindness, and keeps everything running smoothly, often behind the scenes. This award is a well deserved acknowledgment of her everyday contributions.



Make a Difference Award

The Make a Difference Award honors staff whose exceptional contributions strengthen the WMU community. Cristine's selection reflects her peers' high regard for her care, foresight, and unwavering support of students and colleagues. Chosen from a small pool of recipients, the award recognizes sustained outstanding service. Her dedication, reliability, and positive spirit exemplify its values. Congratulations, Cristine, for making a difference in our lives and the lives of our students!



Cristine Thomas



"Registration issue? She solves it. Lab conflict? She smites it with the fury of a thousand suns."

Her personal outreach to international students and her role as "the glue of our department" reflect her strong commitment to inclusion and excellence.

Her work often happens behind the scenes, but its impact is felt by everyone. We are incredibly fortunate to work with Cristine, and this award is a fitting recognition of someone who makes a difference every single day.



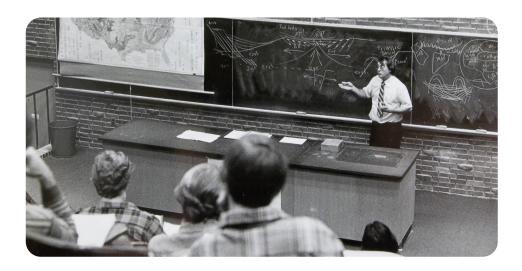
60 Years - Telling Our *Story*

Early Beginnings

Geology at Western Michigan University began in the early 20th century as part of the natural sciences curriculum, introducing students to mineralogy, petrology, and earth science fundamentals. Growing student interest and industry demand soon led to the formation of a dedicated Department of Geology, offering specialized courses and hands-on laboratory and field experiences.

Expansion and Graduate Programs

During the mid-20th century, the department expanded its offerings to include sedimentology, stratigraphy, structural geology, hydrogeology, and geophysics. Graduate programs in master's and doctoral research were established, enabling students to pursue advanced study and contributing to the department's growing research reputation.



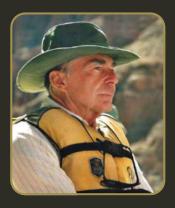
Integration of Environmental Sciences

In the 1990s and 2000s, the department broadened its mission to incorporate environmental sciences, evolving into the Department of Geological and Environmental Sciences. Interdisciplinary curricula combined geoscience with environmental studies, chemistry, and biology, preparing students to tackle emerging challenges in environmental monitoring, remediation, and sustainability.

Modern Era and Community Impact

Today, the department is known for its experiential learning, modern research facilities, and active community of students, faculty, and alumni. Research spans groundwater studies, PFAS contamination, carbon capture, and climate change impacts. With strong alumni connections and growing enrollment, the department continues to prepare geoscientists and environmental professionals to address real-world challenges.

Our Founder



Dr. Lloyd Schmaltz made a lasting impact at WMU through his passion for teaching, mentorship, and geoscience research. He inspired generations of students with hands-on fieldwork and rigorous scientific inquiry, leaving a legacy of excellence, curiosity, and community in the department.

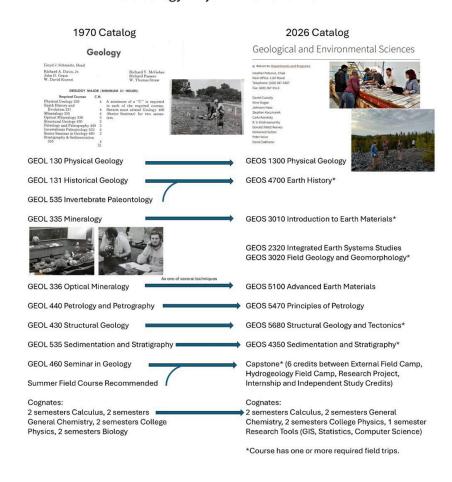


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The Geology Major: Then and Now

For the Department's 60th anniversary, we put together a poster display that compared the Geology Major from the 1969-1970 catalog to our current 2025-26 major. In many ways the program is still true to its roots while also developing with the progression of our field over the past 60 years. The biggest program changes include moving Historical Geology from an introductory course to an upper-level writing intensive elective, combining Mineralogy and Petrology into a single course (Introduction to Earth Materials) and moving Optical Mineralogy into an upper-level course (Advanced Earth Materials) that features a suite of modern analytical techniques, adding an introductory-level field methods and geomorphology course, and requiring a capstone that combines fieldwork and research. We also have a wider suite of electives that include traditional courses like Petrology as well as modern computational and GIS-based courses. Also note how many courses now include a day or overnight field trip! We are happy to take alumni feedback on what courses have most helped in your careers.

The Geology Major – Then and Now



WMU GEOLOGY CLUB est. 1965



The WMU AIPG Student Chapter had a high impact year defined by strong campus presence, experiential learning, and broad community engagement. Members delivered weekly programming, large scale campus events, field activities, and educational outreach that reached more than 200 K-12 students across schools, scouting organizations, and Science Olympiad.



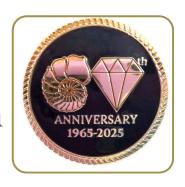
In 2025, the chapter earned AIPG National Student Chapter of the Year for the third consecutive year, recognizing sustained excellence in outreach, programming, and professional development. The year concluded with a student led field trip to Utah in May, reinforcing the chapter's leadership in hands on geoscience education.















The Department of Geological and Environmental Sciences marked its 60th Anniversary Diamond Jubilee with over 80 alumni, faculty, and staff from across the country. Festivities included lab and field tours, faculty presentations, a golf scramble, a "Wine on the Rock" tasting tour, and a special dinner honoring alumni and emeritus faculty. Attendees shared memories of field trips, research, and the lasting impact of their WMU experience. To commemorate the milestone, the department issued special 60th Anniversary Challenge Coins—contact us if you would like to receive one! The celebration highlighted six decades of excellence in education, research, and mentorship, while underscoring the enduring community and connections that define the WMU Geo-Bronco experience.

Designing for the Future

We warmly encourage our alumni to stay connected with the Department of Geological and Environmental Sciences as we look toward the future. Your insights, experiences, and support are invaluable as we continue designing programs and research initiatives that meet the evolving needs of students and the broader geoscience community.

Looking ahead, WMU's geosciences program will continue to emphasize experiential learning, cutting-edge research, and interdisciplinary collaboration, preparing graduates to address pressing environmental challenges, advance sustainable resource management, and innovate in fields ranging from hydrogeology and environmental remediation to climate science and energy solutions. By staying engaged, alumni can help shape the next chapter of the Geo-Bronco legacy and ensure that our department remains a leader in education, research, and community impact.







Building Leaders, One Student at a Time

Our programs and students thrive because of the support we receive from alumni, friends, and partners who believe in the value of hands on geoscience education. Experiential learning opportunities such as field courses, student research, professional travel, outreach activities, and career preparation programs are central to our mission, but they require sustained resources to remain accessible to all students. Continued investment allows us to remove financial barriers, expand learning beyond the classroom, and ensure our students are well prepared to lead in an evolving geoscience workforce.

Supporting hands on learning and student success

Support directly benefits students by strengthening scholarships, underwriting field experiences, enhancing laboratory and instructional resources, and supporting student led organizations that build leadership and professional skills. Contributions also help us grow outreach and engagement efforts that inspire future geoscientists and strengthen connections among students, alumni, and the broader community. Every gift, regardless of size, plays a meaningful role in shaping student success and advancing the long term vitality of our programs.

Those interested in supporting our students and programs can make a gift through the Western Michigan University Foundation. Donations may be directed to specific funds that support student scholarships, experiential learning, or departmental priorities. To learn more about giving options or to discuss how your support can make the greatest impact, please visit the <u>Department Giving Page</u> on our website or <u>contact the Department of Geological and Environmental Sciences directly.</u>





