Small class sizes. Personal attention from your professors. A curriculum customized to suit your interests. A program that provides you with practical skills you can apply in the real world. These are the benefits of pursuing a graduate degree in Civil and Environmental Engineering from The University of Alabama in Huntsville (UAH).

The university’s master’s program includes both a thesis and non-thesis option in the following fields:

- Environmental Engineering
- Transportation Engineering
- Geotechnical Engineering
- Structural Engineering
- Structural Mechanics

The Ph.D. program, which is offered jointly with The University of Alabama in Birmingham, includes six credit hours at the partner institution. Students can choose from a variety of specializations, from space-based construction to geoenvironmental engineering.

So whether you dream of being at the head of the planning board or the head of a college classroom, stay competitive in today’s growing economy with an advanced degree from UAH.

DEPARTMENT OF CIVIL & ENVIRONMENTAL ENGINEERING
256.824.6854
uah.edu/eng/departments/cee

SCHOOL OF GRADUATE STUDIES
256.824.6002
uah.edu/graduate

Already working full time as an engineer? Then our professional master’s degree is for you! The program consists of 30 hours of coursework across three areas: transportation, structural, and environmental. Even better? Most of the courses can be accessed online, which means you won’t have to put your career on hold to get ahead!
As we highlight another year of success for the Civil and Environmental Engineering Department, I am pleased to announce that I have accepted the position as Department Chair in an official capacity. So, it is with great pleasure I welcome everyone to learn about our amazing department and look forward to seeing growth and success in the coming years.

This past year we said goodbye, congratulations, and wished success on future endeavors to several students. I always feel that the reward of teaching is seeing our students learn and mature and venture out in the workforce ready to make a difference in the world. Yet as a result of these great successes, we have also experienced a minor pitfall, with a slight decrease in enrollment. We currently have just fewer than 200 students in the department at the undergraduate and graduate level. We are confident, however, that with the rapid growth of the University, breakthroughs in Research, and the overgrowing interest in STEM, this number will increase.

Not only has our department experienced student change, but also changes in our faculty as well. We have welcomed Dr. Doustmohammadi and Dr. Ma to our faculty and have said goodbye to Dr. Zhou. As always, the role and mission of the department continues.

As we head toward 2020, I believe that with the collective effort of our students, staff, faculty, board members, alumni, and constituents we will work to make the world a better place to live.

Sincerely,

Michael Anderson
Department Chair and Associate Dean of Graduate Education & Research
The American Society of Engineers (ASCE) is an organization that helps young engineers network with professionals and learn how to apply concepts that civil engineers will use in the field. This year, UAH’s ASCE team competed in numerous competitions at the Southeastern Conference. The competition had many large colleges competing including: University of Puerto Rico, University of Florida, Kennesaw State University, University of Tennessee, Georgia Southern University, and even a college from China!

UAH’s ASCE team mainly participated in the steel bridge and concrete canoe competitions. The steel bridge competition had a sub 20 build time and passed the horizontal load test. UAH’s canoe did exceptionally well in the concrete canoe races, placing third and fourth for the product of the canoe and placing fourth overall in the canoe competition. The team proudly placed sixth overall at the conference.

The conference was a great experience for UAH’s ASCE. They learned valuable insight from other universities on how they can improve in the upcoming years. The team is excited and looking forward to competing in Orlando at the University of Central Florida next year!
Ms. Lehman is a Huntsville native having graduated from Grissom High School in 1986. She graduated from Huntingdon College with a Bachelor of Arts Degree in Early Childhood and Elementary Education. After college, Ms. Lehman returned home to begin a career as an educator. After a couple of years teaching, accompanied by her love for science and math, she reenrolled in college and graduated from The University of Alabama in Huntsville, with a Bachelor of Science in Civil Engineering.

For the past 16 years, Ms. Lehman has been a Project Engineer for GEO Solutions where she enjoys helping people solve problems and doesn’t mind getting dirty. As Project Engineer, she has had the opportunity to manage multi-million dollar projects in Alabama, Tennessee, Mississippi, Georgia, and Kentucky. Ms. Lehman finally feels that she has found her passion in life with geotechnical engineering.

Since her college days, Ms. Lehman has been an active member in the American Society of Civil Engineers (ASCE) at UAH. She has also had the opportunity to serve as the Alabama Section President and the Governor-At-Large for Region 4 on the National Level. Ms. Lehman has been recognized for her achievements and has had the honor of being awarded ASCE’s Young Engineer of the Year and Civil Engineer of the Year by the Huntsville Branch for 2019.

Ms. Lehman has been married to her husband Phillip for 26 years, and they have two boys, Robert and Mitchell.
POOJA PARVATHY PREETHA

Pooja Parvathy Preetha earned her bachelor’s degree in Civil Engineering at the College of Engineering, Trivandrum, India; and she completed her masters in Hydraulics and Water Resources Engineering at the Indian Institute of Technology, Madras, India. Before moving to the U.S., Pooja was an Assistant Project Manager at Jones Lang Lasalle, India.

Pooja’s dissertation topic was titled “Spatiotemporally Dynamic Water Quality Modeling using Satellite Remote Sensing and GIS.” Some of her works include investigating the environmental indicators to human health, flood monitoring, modeling the water quality constituents of sediments and nutrients in river basins and developing integrated surface water-groundwater models.

Pooja believes that the zest of life is to innovate with passion and she hopes to continue learning in an academic setting as well as research oriented circles.

ZHENGQI LIAO

Zhenglai Shen is a Ph.D. candidate in the CEE Department. His dissertation focuses on life-cycle considerations in risk-informed decisions for energy-efficient building design under various hazard exposures and climate conditions. During the last five years, he has worked on several different projects which were supported by the Alabama Department of Transportation (ALDOT), National Science Foundation (NSF), and the Department of Energy (DOE).

His research interests include:

- multi-discipline fused building design and retrofitting
- physical-cyber security of building under natural and human-made hazards include cyber-attack
- development and modeling of high-performance construction material for structural and energy synergic building applications
- structural health monitoring through wireless sensor networks and data pattern recognition by fusing data from various sources

CONGRATULATIONS TO OUR PH.D. GRADUATES
GET TO KNOW YOUR FUTURE CIVIL ENGINEERS!

XIANKUN CHEN

Chen is a Ph.D. student in the Department of Civil and Environmental Engineering. The reason he chose this program is that he likes to work in an interdisciplinary program which is challenging and intriguing, and he can contribute to society by protecting the environment. His research mainly focuses on the advanced oxidation process in water and wastewater treatment on contaminants of emerging concern, including improving the efficiency in catalytic ozonation and minimizing the formation of disinfection byproducts. Outside of school, he loves to play all kinds of sports, especially volleyball and tennis.

IZUCHUKWU ALBERT UGWU

Ugwu joins UAH from Nigeria. He is currently an MSE student in the Department of Civil and Environmental Engineering. He is working on the Post-Disaster Recovery Planning for Interdependent Infrastructure Systems at the Resilient Civil Infrastructure (RCIS) Lab where he works as a graduate research assistant under Dr. Abdullahi Salman. Prior to joining UAH, he worked as a structural engineer at Arup, specializing in structural Integrity Assessment and Impact Assessment. Working on his current interest gives him the opportunity to broaden his knowledge and has opened the door to new concepts in hazard mitigation on a network scale. He is also learning new concepts in Industrial and Systems Engineering and their application in Civil Engineering. He is a member of the Structural Extreme Events and Reconnaissance (StEER) Network, and the Nearshore Extreme Events Reconnaissance (NEER) Association. With these groups, he has access to a broad network of researchers and investigators, and he is able to gather experience in virtual and field assessment of areas affected by natural disasters. Outside work and school, Izuchukwu likes to travel, read books, and play soccer.

JUSTIN WEEMS

Weems is a senior whose time here at UAH has been one of learning, making new friends, and memories. When he first transferred here he wasn’t sure that Civil Engineering was what he would be passionate about. The staff and students here changed his mind instantly. The quality of the professors here and the friendships he made confirmed his decision. Later on he found more friends who enjoy his passion for fishing and joined the UAH Fishing Team. As the current Treasurer he is in charge of all the finances of the team.

THOMAS WISINSKI

Wisinski is a senior graduating with a Bachelor’s degree in Civil Engineering. Throughout his time at UAH, he has been heavily involved in UAH’s ASCE Student Chapter serving as the Treasurer, President, and Concrete Canoe Co-Chair. He enjoys hiking, kayaking, attending concerts, DJing parties, listening to his record collection, and studying for Dr. Al-Hamdan’s exams. He has interned for Barge Design Solutions in the area of Site Development for the past two years and is looking forward to his career as a Civil Engineer. He also plans on completing his Master in Civil Engineering with a focus in Water Resources.

WENWEN YANG

Yang is Ph.D. graduate student in Department of Civil and Environmental Engineering. She earned her bachelor’s in Macromolecule and Material Engineering from East China Jiaotong University (Nanchang, China) and a Master’s degree in Environmental Engineering from the University of Alabama in Huntsville. She is currently working as a graduate research assistant/teaching assistant with Dr. Tingting Wu. Her research focuses on advancing heterogeneous catalytic ozonation for water treatment and reuse. In between all her research, she still finds time to get lost in a wonderful book and music.
DR. RUI MA

Dr. Ma is an Assistant Professor in the Department of Civil and Environmental Engineering at The University of Alabama in Huntsville. He received his Ph.D. degree in Civil Engineering from Rensselaer Polytechnic Institute in 2013, and his B.Eng. degree in Automation from Tsinghua University in 2009. Prior to joining UAH, he was a Lecturer and Postdoc Scholar in the Department of Civil and Environmental Engineering at University of California, Davis, where he was teaching undergraduate and graduate courses, collaborating with visiting scholars, supervising undergraduate and graduate students, and conducting research on dynamic transportation network modeling, new mobilities, sustainable transportation systems, and urban traffic data analytics.

Dr. Ma’s research interests include understanding and analyzing dynamic commuting traffic patterns with new mobility services in both analytical and numerical forms, designing accessible and intelligent control strategies to enhance the performance in efficiency and toward an environment and public health-friendly transportation system, and leveraging real-time infrastructure data and crowd-sourcing data for forecasting and managing traffic systems.

Standing at the crossroad where the traditional planning, control, and optimization theories meet the revolutionary technologies, services, and social trends, Dr. Ma’s long-term research goal is to develop an innovative modeling framework for new mobility services. By analyzing how dynamic traffic patterns would interdependently impact the planning and operations of intelligent infrastructure, and optimizing urban mobility and sustainability by intelligent and nonconventional control strategies, his research would ultimately contribute to both the advancement of transportation science and the contemporary transportation industries.

Dr. Ma is an active member of Transportation Research Board (TRB) and Institute for Operations Research and the Management Sciences (INFORMS).

---

DR. MEHRNAZ DOUSTMOHAMMADI

Dr. Doustmohammadi is a Lecturer and Research Scientist in the Department of Civil and Environmental Engineering at The University of Alabama in Huntsville. She graduated with her bachelor’s degree from Khajeh Nasir Toosi University of Technology in Tehran, Iran in 2013 and received her Master’s degree in Industrial Engineering and her Ph.D. in Civil Engineering from UAH in 2015 and 2018, respectively.

Dr. Doustmohammadi’s area of research is in traffic safety and modeling. In her capacities as a Research Scientist, she works closely with the Alabama Department of Transportation and leads a program which provides instruction and training for public transportation across the state of Alabama utilizing a Real-time Instruction for Driver Education (RIDE) simulator. She performs crash analysis using advanced statistical techniques to look for factors contributing to crashes in the state of Alabama.

Dr. Doustmohammadi works with the Resilient Civil Infrastructure Systems Lab (RCIS) on studying the recovery to infrastructure damaged by natural and manmade hazards.

---
FUNDING

10. NSF-REU Supplemental Funding: Plasmon-enhanced Catalytic Ozonation for Water Treatment and Reuse (PI: Tingting Wu), NSF, Period: 06/2019~08/2020, ($12,000).


30. Marshall, Justin; Smith, Daniel; Lyda, Andrew; Roueche, David; Davis, Brett; DJIMA, Wilfrid; Heo, YeongAe; Kijewski-Correa, Tracy; Moravej, Mohammadtaghi; Rittelmeyer, Brandon; Salman, Abdullahi; Prevatt, David; Robertson, Ian; Mosalam, Khalid. “StEER - Hurricane Dorian: Field Assessment Structural Team (FAST-1) Early Access Reconnaissance Report (EARR),” DesignSafe-Cl. 2019, doi.org/10.17603/ds2-4616-1e25.

31. Roueche, David; Cleary, John; Barnes, Robert; Davis, Brett; Marshall, Justin; Rittelmeyer, Brandon; Smallegan, Stephanie; Guo, Yanlin; Hodges, Courtney; Kijewski-Correa, Tracy; Salman, Abdullahi; Turner, Kelly; Merschman, Eric; Mulchandani, Harish; Prevatt, David; Robertson, Ian; Mosalam, Khalid. “StEER - 3 March 2019 Tornadoes in the Southeastern U.S.: Field Assessment Structural Team (FAST) Early Access Reconnaissance Report (EARR),” DesignSafe-Cl. 2019, doi.org/10.17603/ds2-qav0-t570.

Industrial Advisory Board of the Civil & Environmental Engineering Department

We thank the board members for their continuous dedication and service in support of the Civil Engineering Program.

Crawford, Alvin B., P.E.
Senior Civil Engineer
Chugach Management Services, Inc.
Redstone Arsenal, AL

Doss, Wade, P.E., PMP
Director of Engineering
U.S. Army Corps of Engineers
Huntsville Engineering and Support Center
Huntsville, AL

Kimbrough, Jack, P.E.
Project Manager
Barge Waggoner Sumner and Cannon, Inc.
Huntsville, AL

Lehman, Barbara, P.E.
Project Manager
GEO Solutions, LLC
Huntsville, AL

Mucke, Fritz, P.E.
Water Operations Manager
Huntsville Utilities, AL

Ozier, Johnny, P.E.
President, OMI,
Huntsville, AL

Ross, Boyce, P.E. and Board Chair
Director of Engineering
U.S. Army Corps of Engineers
Huntsville Engineering and Support Center
Huntsville, AL

Yeldell, Sara L. P.E.
Project Engineer
S&ME, Inc.,
Huntsville, AL