

Phi Alpha Epsilon proudly presents the...

# Architectural Engineering Newsletter

2013 Edition

KANSAS STATE UNIVERSITY

## Upcoming Events:

- **Engineering Career Fair**  
February 11-12, 2014
- **EWeek**  
February 16-22, 2014
- **All-University Open House**  
April 4-5, 2014
- **Graduation**  
May 17, 2014

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## Welcome

Dear Alumni, Friends, and Colleagues,

Greetings, on behalf of the faculty, staff and students of the Department of Architectural Engineering and Construction Science. I hope you enjoy the Fall 2013 Architectural Engineering Phi Alpha Epsilon newsletter outlining many of the noteworthy accomplishments and activities of those involved with the Architectural Engineering program at K-State. We are especially proud of the national and international recognition earned by the program as a result of the leadership, professionalism and hard work of many of our students and faculty. Their efforts have brought great credit to the ARE program, the Department and K-State as we continue our winning tradition. I am pleased to present a few highlights of activities and accomplishments of our student/faculty team during the past academic year.

- Chris Ahern, PE, LEED AP BD+C, K-State ARE MS/BS 2005, joined our faculty in January 2013 and is teaching primarily in the Building Systems Design (MEP) area.
- We gained three new construction-focused faculty members who continue our tradition of bringing strong industry experience into the classroom: Shannon Casebeer (KSU CNS 1992), Katie Loughmiller (KSU CNS 2001) and Greg Stueve (KSU CNS 1984).
- We have 10 student organizations in the department that remain very active through meetings, technical presentations, social events, industry/site visits, conference trips, and philanthropy projects.
- Our student design competition teams remain very strong, placing 1<sup>st</sup> in the 2013 ASHRAE ASHRAE International Student Design Competition in the HVAC System Selection Category and 1<sup>st</sup> in the 2013 AEI National Student Design Competition in the Electrical Category.

We continue strong undergraduate enrollment for Fall 2013 with nearly 600 students and over 300 total enrolled in Architectural Engineering. Outstanding employment opportunities abound with 100% entry level employment for our graduates and multiple summer internships for most of our students.

Dave Fritchen stepped down as department head at the end of 2012 after 14 years of dedicated service and I began as the new department head in January 2013. I look forward to working with all of you, our students, and our faculty as we continue the growth and development of the department.

I hope all of you are as proud as I am with the success of our Architectural Engineering program, students, faculty and staff. We are grateful to you, our alumni, friends, and colleagues, for your continuous and generous support as a "partner in our success". We hope to see you on campus and you are always welcome to visit us any time you can. If you cannot make it back as often as you like, please visit [www.ksu.edu/are-cns](http://www.ksu.edu/are-cns) to keep up with our news and report news of your own.

With Purple Pride,  
Raphael A. (Ray) Yunk, PE, LEED AP  
Department Head and Professor  
(K-State ARE BS 1988, MS 2004)



## Phi Alpha Epsilon

Welcome to the 2014 issue of the Architectural Engineering Newsletter! Phi Alpha Epsilon is honored to present this collaborative effort that showcases the growth, success, and activities within Kansas State University's Department of Architectural Engineering. We would like to thank the Presidents of our award-winning student organizations who submitted articles about their organization's accomplishments. Also special thanks go to Kristin Stewart, our newsletter editor, for coordinating and editing this year's remarkable issue, and to Don Phillippi for his unending support as our advisor. Alumni and friends, we hope you find this publication insightful and educational.

***“The  
Department of  
Architectural  
Engineering and  
Construction  
Science is  
constantly  
growing and  
transforming.”***

Since the previous newsletter, Phi Alpha Epsilon has welcomed two new classes of exceptional initiates. We would like to congratulate all our new members! We look forward to working alongside them in the coming years. Phi Alpha Epsilon's overarching goal is to aid underclassmen within the department in their academic and professional endeavors. Our active members offer free tutoring to all students in the department. A recent addition to our department involvement is weekly FE review sessions for Architectural Engineering students. We focus on topics that are historically more challenging on the FE in hopes of enabling our students to be successful in the first step towards becoming licensed engineers. We also assist the departmental staff with pre-enrollment night each semester. Every spring, our new members create a Curriculum Display that they present at the Engineering Open House to the students and families visiting K-State. The display communicates the courses, degree options, and career opportunities within Architectural Engineering. Phi Alpha Epsilon is proud of its hard-working members and their efforts to assist the department, to help their fellow students, and to reach out to prospective students.

The Department of Architectural Engineering and Construction Science is constantly growing and transforming. Phi Alpha Epsilon would like to congratulate Ray Yunk and welcome him to his new position as Department Head! We would also like to extend a special welcome to the department's four new faculty members: Christopher Ahern, Shannon Casebeer, Katie Loughmiller, and Greg Stueve. We look forward to getting to know them and having the opportunity to learn from their industry experiences.

It is through the faculty's constant involvement in industry, and through the support from alumni, that our department is able to advance. We are proud of our strong reputation as one of the leading programs in Architectural Engineering, and we encourage you to come to Manhattan and visit the department. Talking to students and faculty is a wonderful way to get first-hand experience of the enthusiasm we have for this program – an enthusiasm we hope you share. Thank you so much for your support of the Architectural Engineering Program at Kansas State University.

By Lauren Delosky  
Chapter President, PAE



Spring 2013 Initiates

## Architectural Engineering Institute

The Kansas State University chapter of Architectural Engineering Institute has had a very successful start to the 2013-2014 academic year full of great social and academic events. These gatherings have brought our students together to get to know one another as well as more about the department. AEI has hosted four seminars with four more planned for the spring, the Welcome Back Picnic, as well as a few larger events including:

**AEI National Conference – Philadelphia, Pennsylvania:** This is an annual conference that includes several workshops, technical paper presentations, invited technical sessions, panel discussions and local tours of technical interest. This event also holds the ASCE Charles Pankow Annual Architectural Engineering Student Competition. The competition allows for students to form multi-disciplinary teams and design integrated engineered systems for high performance buildings. The five categories for this competition are: Integrated, Structural, Mechanical, Electrical and Construction. This past year at Penn State, the Electrical team took first place in the competition with an innovative design that featured a DC power distribution system in conjunction with micro-turbines used for Combined Heat and Power (CHP).

**Greenbuild - Philadelphia, Pennsylvania:** In 2013 Greenbuild will showcase the latest in innovative products and services, exemplifying the idea of utilizing green to grow business to attendees from around the world. Students are able to attend numerous presentations on implementing energy efficient products, programs, and designs to further our exposure in sustainable design.

**Open House - Manhattan, Kansas:** This is an opportunity to present the department, student organizations, and our most innovative ideas and projects. During Open House the College of Engineering holds a competition between engineering departments for their displays and floats.

**AEI Classic Golf Tournament – Colbert Hills:** This is an annual event that involves students and company representatives paired together for great networking opportunities. This is the second year the tournament has been hosted at Colbert Hills and it has proved to be a successful venue as AEI has turned this event into a great source of fundraising as well.

AEI would like to thank all of our sponsors for their generosity and support. Through their contributions, we have been able to engage ARE students in enjoyable and educational activities outside the classroom. Thank you for the continuing support of Architectural Engineering at Kansas State University!

By Landon Stephens  
Chapter President, AEI



AEI Competition Team at Penn State



**ARCHITECTURAL  
ENGINEERING  
INSTITUTE**

**“[Open House]  
is an  
opportunity to  
present ... our  
most innovative  
ideas and  
projects.”**



Architectural Engineering Institute Leadership  
2013-2014



## ASHRAE

The purpose of KSU student chapter of American Society of Heating, Refrigerating, and Air Condition Engineers (ASHRAE) is to expose students to the HVAC industry. To accomplish this, our student chapter offers many presentations and technical tours throughout the semester. ASHRAE also provides students with multiple opportunities to meet and network with industry professionals and employers. We are also proud to announce that our ASHRAE competition team took first place in the System Selection category last Spring.

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This year has a full slate of quality events for students to enjoy. This fall we have already had the opportunity to tour the Cook Fan Manufacturing plant in Springfield, Missouri. We also saw a presentation about the upcoming engineering complex expansion from one of our own faculty who is involved in the design. ASHRAE has many events coming up soon this year as well. Some social events we have planned include: the departmental chili cook off, a holiday potluck, tour of the KSU central plant, and the Camfil containment trailer. Educational activities include: departmental seminars, project tours, and presentations by visiting companies, faculty, and upperclassmen. As an organization we try to be diverse in the field of HVAC and expose students to a wide range of current and emerging technologies. With this goal, ASHRAE has been able to help students learn throughout the entire academic year by offering as many activities as the calendar permits. This January we will be taking 10 students to the 2014 ASHRAE Winter Meeting in New York, NY. Not only is this a great learning experience, but we will also be in attendance to support the K-State design team that took first place in the System Selection competition category. They worked extremely hard and it will be great to see them rewarded for their efforts.

ASHRAE is proud to be able to offer such exciting learning opportunities, and will continue to build upon an already strong foundation that has set the precedence for student learning. On behalf of everyone in KSU ASHRAE, I would like to thank all of our generous sponsors that make our yearly events and activities possible. Through their contributions, we have been able to make our functions not only educational, but enjoyable as well. This has been a great year for ASHRAE, and we look forward to building on such a rewarding year with a membership full of bright and energetic students.

By Kyle Knuth  
Chapter President, ASHRAE



ASHRAE Members at Cook Fan Tour 2013

## illuminating Engineering Society

The Kansas State University student chapter of the Illuminating Engineering Society (IES) is an organization that promotes interest in architectural lighting design and control with an emphasis on effectively using the latest technologies and reducing energy consumption. We have seen a growth in interest and membership in our organization in the past few years, and are very excited to offer an increasing variety of trips, tours, events, and guest lectures on a range of lighting topics.



Every year, KSU IES members get the opportunity to attend LIGHTFAIR INTERNATIONAL, the world's largest annual architectural and commercial lighting trade show and conference. Last year, students attended LIGHTFAIR 2013 in Philadelphia, Pennsylvania, where they had the opportunity to visit displays set up by various lighting manufacturers in the exhibit hall. They also attended a seminar of their choosing presented by professionals from industry. This upcoming June, IES is planning to travel to Las Vegas, Nevada for another LIGHTFAIR INTERNATIONAL conference.

In addition to our annual major trip, IES gives students the opportunity to attend several smaller tours throughout the year. They travel to the Kansas City area to enjoy the lighting designs of many local firms through the Kansas City Illuminating Engineering Society (KC IES) Organization. In September, KSU IES attended the Illumination Awards Banquet, where students got the opportunity to meet professionals from industry while viewing some award winning lighting designs from around the Kansas City area. Students also get a chance to attend the KC IES Student Night to meet other students interested in lighting while getting a closer look at exceptional lighting designs. Additionally, each spring we visit the H.E. Williams plant to see how a wide variety of commercial and residential light fixtures are produced. Not only do we get to travel to attend site lighting tours, we also get faculty lead tours such as a look at various lighting applications around the KSU campus.

Additionally, IES hosts educational events and activities on campus. This fall, IES hosted a lecture on outdoor and roadway lighting projects. Another speaker from industry is planned to visit during the spring semester. This October we held our first freshman educational night to help guide young students who are interested in lighting through the Architectural Engineering program, and show them how to get involved with IES and other organizations to benefit their future professional lives.

Oh behalf of everyone in the Kansas State University chapter of Illuminating Engineering Society, I would like to thank all of our generous sponsors that make our yearly events and activities enjoyable and possible.

By Abby Harrison  
Chapter President, IES

***“We have seen  
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IES Members at LIGHTFAIR INTERNATIONAL 2013

# MCAA

## MCAA

The Kansas State University Chapter of the Mechanical Contractors Association of America (MCAA) is a student group in the ARE-CNS department. Our chapter focuses on mechanical aspects of the construction and design industries on current projects, standard industry practices, innovative technologies, and energy efficient systems. KSU-MCAA is interested in mechanical, electrical, plumbing, fire, and controls systems. With support from our parent organization, MCA-KC, our chapter continues to grow and looks to expand on its already strong ARE-CNS membership. Over the course of the past year KSU-MCAA has continued to participate in national events, competition teams, tours, and industry guest seminars.

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In the early fall, members attend the MCAA’s Student Chapter Summit. K-State sent four chapter representatives to Kansas City, MO for Summit 2012 where students had the opportunity to exchange ideas on chapter development, test their skills and knowledge in a mini competition, attend seminars by industry professionals, tour Arrowhead Stadium and the Kauffman Center for the Performing Arts, and learn the details about the latest national student chapter competition. Our members are currently preparing to attend Summit 2013 in Memphis, TN and look forward to putting together a winning competition team!

Convention 2013 took place in San Antonio, TX with K-State being represented by three members. Convention is a national event attended by MCAA industry professionals from all across America focusing on industry trends, company development and seminars from keynote speakers.

In addition to fundraising and university events, KSU-MCAA also participates in many jobsite tours provided by our valuable alumni in the Kansas City area. Over the last year the chapter has toured the Bill Snyder Family Stadium – West Stadium Center, Fort Riley Hospital, and Kansas State Basketball Training Facility.

KSU-MCAA would like to extend our gratitude to all of our sponsors whose generosity and contributions have made the creation and growth of this chapter possible. With an industry professional present at member meetings, our organization has been shown a tremendous amount of support from our alumni. We hope this advantage will help us to continue learning about the ever-growing field of mechanical construction.

By Eric Engelland  
Chapter President, KSU-MCAA



MCAA Student Summit 2012 - Kansas City, MO



MCAA Student Summit 2013 - Memphis, TN

## SEAKM

Structural Engineers Association of Kansas and Missouri – Kansas State University Student Chapter (SEAKM-KSU) is one of the first and most active student chapters of the National Council of Structural Engineers Associations (NCSEA) and is now in its thirteenth year. The purpose of SEAKM-KSU is to introduce, educate, and expand the art and science of Structural Engineering to students. SEAKM-KSU strives to be active within the department, campus wide and in the surrounding communities through industry presentations, job site tours, and community service projects.

SEAKM-KSU continually attempts to meet or exceed the goals of the organization: promotion of the field of structural engineering, making valuable connections in and out of the classroom, and making an impact on the community through service. At the beginning and end of each year SEAKM-KSU has a picnic to provide an opportunity for students and faculty to connect. Another annual social event is the Holiday Candy Build-off. Each semester SEAKM-KSU brings in a variety of speakers from industry to allow members to see all the field of structural engineering has to offer.

This year SEAKM-KSU is making a big push to be as active as possible. Open House has been, and will continue to be, one of SEAKM-KSU's most successful campus activities. For the past two years SEAKM-KSU has created a "CANstruction" display, made of canned food products to benefit the Flint Hills Breadbasket. Another service activity SEAKM-KSU participated in this year was the Don't Get Blown to Oz Presentation for GROW, an event to engage middle school and junior high school girls in science related fields. SEAKM-KSU strives for technical excellence as well. Some examples of technical presentations this year are the Engineering Complex Phase IV Expansion presentation from Walter P Moore, and the Damage Assessment Seminar from Dudley Williams & Associates. ASCE Webinars are also offered throughout the year on a variety of topics. Job site and other technical trips, such as AISC's Steel Day, are opportunities for the students as well. This spring, SEAKM-KSU is planning on sending a group of students to the SEI Structures Congress 2014 in Boston, Massachusetts.

SEAKM-KSU is always looking for ways to improve. Some goals for this upcoming year are engaging the freshman and sophomore classes, increased community service, and continued opportunities for professional development.

If you have any questions about the organization or would be interested in presenting at a meeting, please contact the current president, Jarrod Zaborac at [jzaborac@ksu.edu](mailto:jzaborac@ksu.edu).

By Jarrod Zaborac  
Chapter President, SEAKM-KSU



***“Goals for this upcoming year are ... continued opportunities for professional development.”***



Holiday Candy Build-off 2013



CANstruction  
Open House 2013



Steel Day at Cast Connex  
Atchison, KS



## ARE-CNS Ambassadors

***“Our main goal  
as Ambassadors  
is to help  
better the  
department.”***

The ARE-CNS Ambassadors are a group of 11 departmental students (5 CNS, 5 ARE, 1 president) and our advisor, Ray Yunk, that work to make improvements within the department, as well as help with recruiting prospective students and retention of current students. We do these things in many ways. Most recently, we have started up a mentorship program within the department. We are currently in the process of recruiting possible mentors and will soon be attending two ARE and CNS Orientation classes to meet and assist our mentees before the department pre-enrollment night. This will give the younger pre-professional students a closer tie to the department while they are getting through all of their pre-requisite courses in their first two years. Another recent activity the Ambassadors have been involved in is the Academic Majors Fair. We accompanied faculty at our department booth in the fair, and answered questions from students exploring possible majors. The Ambassadors feel it is important to make student-to-student connections with those who may become a part of the ARE/CNS department someday, and attending these activities help us do so. An additional way we are making connections with our prospective students is sending hand-written letters to high school students who have visited our department on a faculty-led tour recently. We like to reach out to them and offer our contact information in case they have any questions they'd like a student in the department to answer.

Our main goal as Ambassadors is to help better the department, whether that be through assisting current students as mentors, coming up with new ideas and programs to help our department grow, catering to prospective students, or assisting the faculty. We as Ambassadors are here to aid in any way we can!

By Margaret Waggoner  
Chapter President, ARE-CNS Ambassadors



ARE-CNS Ambassadors meeting

## New Faculty

**Chris Ahern, PE, LEED AP BD+C, Assistant Professor**



Chris received his Bachelors and Masters of Science in Architectural Engineering from Kansas State University in 2005. His scholarly activity include: MEP systems and Construction Administration/Management. He is a member of Architectural Engineering Institute (AEI), American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) and American Society for Engineering Education (ASEE).

The courses he is currently teaching include:

- ARE 100 - Architectural Engineering Orientation
- ARE 534 - Building Thermal Systems
- ARE 590 - Integrated Building Systems
- CNS 100 - Construction Science and Management Orientation
- CNS 200 - Computer Applications in Construction and Engineering

Before coming to Kansas State as an assistant professor in Spring 2013, Chris worked for PKMR Engineers as a Principal and Licensed Professional Engineer. He has 8 years of experience in the design and construction industry working on projects from a wide range of fields.

**Shannon Casebeer, Instructor**



Shannon received his Bachelors of Science in Construction Science and Management from Kansas State University in 1992.

He worked for 21 years in industry, engaged in various commercial building construction projects, heavy civil construction projects and railroad construction projects.

His scholarly activity includes: Construction Management, Construction Estimating, and LEED. He is also a member of AGC.

The courses he is currently teaching include:

- CNS 200 – Computer Applications for Engineering and Construction
- CNS 641 – Construction Estimating

## New Faculty

**Katie Loughmiller, LEED GA, Instructor**



Katie received her Bachelors of Science in Construction Science & Management from Kansas State University in 2001. Her scholarly activity includes: Project scheduling, Project cost control, and Sustainability. She is a member of the National Association of Women in Construction (NAWIC), where she is active with both the local Topeka chapter and the NAWIC Education Foundation. She is currently advising the American Concrete Institute Student Chapter and is a coach for the ASC Student Competition Team.

The courses she is currently teaching include:

CNS 321 - Construction Techniques and Detailing

CNS 645 - Construction Scheduling & Cost Control

Before coming to Kansas State as an instructor in the Fall of 2013, Katie worked for American Constructors, Inc in Austin, Texas and Ron Fowles Construction, Inc in Manhattan, KS. She has 12 years of industry experience in project management on projects varying in size from \$5,000 to \$65 million.

**Gregory Stueve, Instructor**



Greg received his Bachelors of Science in Construction Science from Kansas State University in 1984. His scholarly activities include: Construction Management, Construction Cost Estimating, Building Materials and Selection, Quality Control, CM@ Risk Project Delivery. He is a member of the Associated General Contractor (AGC) of Kansas.

The courses he is currently teaching include:

CNS 320 - Construction Materials

CNS 641 - Construction Estimating

Before coming to Kansas State as an instruction in the Fall of 2013, Greg worked for McPherson Contractors, Inc. as a senior project manager. Greg has 30 years of construction industry experience working with projects ranging from \$100,000 up to \$46 million, in the commercial building sector, including hospital facilities, educational facilities, law enforcement, retail, multi-family, office buildings and financial institutions. He and his wife have two grown children who both graduated from K-State.



