



The Dodecahedron



Value Through Efficiency: The Mission and Wide-Ranging Impact of the Master of Science in Operations Management Program

The Master of Science in Operations Management (MSOM) graduate degree program is the University of Arkansas' largest graduate program with more than 220 graduates and over 3,300 course enrollments in the 2014-2015 academic year. This applied management program for working professionals attracts managers and professionals in various business sectors, industries, military branches of service and government offices. In the 2014-2015 academic year, more than 800 students were enrolled in MSOM courses. The program is offered at the Fayetteville campus, at live Graduate Resident Centers, and via distance learning online (eighty percent of enrollments).

Purpose and Strategy

The purpose of MSOM is to create value through efficiency by applying the strategic, tactical and operational activities of operations management. Strategic activities include establishing long-term organizational objectives and strategy formulation/selection that address leadership, human resources, operations, marketing, finance, R&D and information management. Tactical activities include applying project management methodologies, production planning scheduling, budgeting, decision-support applications development, information technology management, determining the optimal location and layout, process and capacity design, and supply chain management. Operational activities include managing issues concerning quality, lean production & inventory, reliability & maintenance and health & safety administration.

The program is led by Dr. Greg Parnell, an accomplished researcher who served in the Air Force and in academic positions including Professor of Systems Engineering



Emily Nichols and Dr. Greg Parnell

at West Point. There is a professional staff along with full-time and adjunct faculty to deliver a program that provides academic rigor and instruction from faculty with real-world industry and government experience. The MSOM program offers students flexibility by operating in 8-week terms, remaining low cost, and having an online option for all courses. This flexibility accommodates students employed full-time by Fortune 500 companies such as Walmart, Sam's Club, Tyson Foods, J.B. Hunt Transport, Fed Ex, Lockheed-Martin, and Pratt & Whitney. The program has many current military members and veterans from all branches of service stationed at host bases around the world.

Operations Management coursework emphasizes practical knowledge in areas such as project management, economic decision-making, supply chain management, human behavior analysis, quality management, and operations research, as well as many other areas of importance to today's manager. Program content focuses squarely on the concepts, methods, and tools that are essential to the successful management of work processes, projects, and people in a wide spectrum of

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Fall 2015

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“We were each educated in a culture that taught us to contribute to our profession and inspired us to serve our communities”

**Mark those calendars!
2016 AAIE meetings are on April 8-9**

From the President...

Dear Fellow Academy Members,

How fortunate we all are to have been shaped by what has to be one of the greatest departments in this country. I am privileged to lead the Academy as we approach our 30th Anniversary. Quoting Bill Denton '76 from The Dodecahedron, Fall 2010, “The Academy was established to recognize the achievements of U of A IE graduates and to provide continuing guidance and support to the Industrial Engineering department”.

I have a very clear memory of a simple suggestion made by my father to ‘just try’ engineering rather than a liberal arts degree. That completely changed the trajectory of my career and my life. Each of us has a unique story of how we came to study IE and became graduates of our wonderful department, but we also share many common experiences.

We each share experiencing Dr. Imhoff as department head, professor, supporter, and mentor, but ultimately, as a friend. We each share the fond memories of Rick Malstrom as department head, professor, jazz musician, and again, as our friend. We have been fortunate to have John English in four distinct roles in our Academy: professor, department head, Academy member, now Dean, and a forever friend. We each share knowing and enjoying Kim Needy as our first female department head and now cheer her on as the Dean of the Graduate School and International Education, and another forever friend. Now, we are fortunate for Ed Pohl to be department head and share in his leadership of our department and support of our Academy. There are many good times and memories, with more to come.

I remember my first tour of Bell Engineering Center with my parents in 1986, being greeted by Dr. Imhoff, faculty, and staff. That beautiful building on Dickson had just opened and the labs were state of the art. With the supportive staff and faculty, and the new facilities, how could one not want to be a part of that?

I had no clue how much time I would

spend in those in labs. From carving H-O-G-S in Dr. Fant’s robotics lab, programming conveyors for Dr. Asfahl’s class, and many computer lab hours to finish Dr. Taha’s OR homework, the faculty and facilities provided an excellent education. The John A. White Engineering Hall holds many dear and unique memories for those who roamed those halls amidst some distinct boyish odors (according to my mother).

We were each educated in a culture that taught us to contribute to our profession and inspired us to serve our communities. This is evident in gifts and service this Academy provides. We’ll achieve our goal of \$2 million scholarship endowment. Our department has a need for both faculty and facilities. Departmental endowed chairs and laboratories are essential to attract the best faculty and students and necessary to assist the University to reach its goal of being a Top 50 Public Research University.

The Academy Board, Committee Chairs, Committee Members, and Academy volunteers are all hard at work achieving new milestones. The A4U Committee has exceeded previous participation numbers in its three major focus areas. Scholarship endowment gifts have broken records this year, as has the amount of scholarships. Our Membership Committee is reaching a wider range of eligible nominees. The Global Experience Committee continues to raise the bar by sponsoring international design projects in INEG senior design class. I couldn’t be more proud to be a part of this Academy and this IE family.

Thank you for your support.



**Angela Kuli, BS '92
President**

Sincerely,
Angela Kuli (BSIE '92)
angela.kuli@ahkcons.com

Scholarship News



**Bob Etien, BS '66
Scholarship Chair**

Last year (2014-15) was a record all around and you did it with \$108,000 in new Scholarship donations and \$67,000 in Scholarship awards. We had donations from 65 members and friends and 12 of those were first time donors. For the previous 5 years we averaged \$36,000 in donations from 41 donors per year.

School year 2015-16 will be year two of our campaign to reach \$2,000,000 in AAIE Scholarship Endowments, but will be the first full year for you to take advantage of the \$150,000 matching pool that 3 members created last year. There is \$100,000 remaining so let's take full advantage. Remember, for every dollar you designate to scholarships over and above your annual dues the matching pool will donate a dollar.

I hope you will read the article on page 9 highlighting a "typical" AAIE scholarship donor. It is the first of many that will be a part of this publication. This article could have included any of you reading this and was intended only to show it takes all of us to make it happen and keep it going. There is not one description that identifies the typical AAIE Scholarship Donor. It can be any of us.

Every year I have the pleasure of representing you at the annual Student Awards Banquet where scholarship students are recognized. It is impossible for me to adequately express the THANKS I see in student's faces but here are a few comments we extracted from Thank You notes students sent to the Academy.

"Growing up in a less privileged community has not only offered financial and academic challenges but has also helped me realize the value of education. My educational pursuits would not be possible without your generous support. Thanks for enabling this opportunity."

"I cannot tell you what a blessing and gift this scholarship is. I pay my own way through college, and this gift allows me to be the best student I can be...by lifting the financial burden."

"I wanted to extend to you my many thanks for your gift to the University as it is helping to fund my education. I am so grateful for your generosity. Your support means so much to me, and I hope to pay it forward in the future by providing support to U of A IE students just as you have."

Let's all stay involved and make this another record year!

Scholarship Committee

| | |
|------------------|---------------|
| Bryan Billingsly | Sam Chaffin |
| Kelvin Dedner | Dewey Freeman |
| Tim McKenzie | Bob Etien |

"There is not one description that identifies the typical AAIE Scholarship Donor..."

To make a contribution:

**Please make check payable to:
University of
Arkansas Foundation
and mail to:**

AAIE
Dept of
Industrial Engineering
4207 Bell
Engineering Center
University of Arkansas



Did You Know? Accredited Industrial Engineering Programs in the U.S.

A search for the keywords "Industrial" and "Engineering" on the ABET website returns 102 accredited IE programs.

ABET Accredited Programs Search
<http://main.abet.org/aps/accreditedprogramsearch.aspx>

“The College of Engineering has record enrollments...a credit to recruiting and retaining top quality students”

From the Department...

Dear Academy Members,

It is fall on ‘The Hill’ and we are enjoying all the activities associated with being back in school, football games, and cooler temperatures. The college is even busier this semester with record enrollments of 3,265 undergraduates. New freshman enrollment topped 800 for the first time in the college’s history! Fellow AAIE Member and Dean of Engineering, Dr. John English said, “Our increased enrollment is a tribute to the excellent faculty and top quality programs we have here in the College of Engineering. But it is also a credit to the outstanding job being done to recruit and retain top quality students. “

Bryan Hill, assistant dean for student recruitment and diversity, Eric Specking, director of undergraduate recruitment, and Richard Cassady, who directs our Freshman Engineering Program (FEP), all deserve to be recognized for their passion and hard work.” Dr. Cassady is an outstanding faculty member in the



Fall on the Hill Looking at Old Main

department, and we applaud his leadership efforts in FEP. We are also proud to note that Bryan Hill (BSIE 2003, MSIE 2007) and



Dr. Ed Pohl

Eric Specking (MSIE 2013) are both graduates of our department.

Even with the continued growth, the University of Arkansas holds strong to tradition. We treasure the iconic Old Main which is not only the oldest building on campus, but also one of the oldest buildings in the state being constructed between 1873 and 1875. Our alums are honored as their names are etched in Senior Walk, a lasting symbol of accomplishment and pride. “Calling the Hogs” and “WPS!” are unique and celebrated traditions. Most of you know the words to the Alma Mater and the Fight Song, and you probably have fond

(Continued on page 5)



1920's



1920's



1930's



1930's



1950's



1960's

From the Department...

(Continued from page 4)



Generation Z Using the “Hi Mom” Webcam

memories of pep rallies in the Chi Omega Greek Theatre.

Generation Z will leave their mark as well with new traditions that are emerging. One of those is the installation of “Hi Mom” web cameras (see photo above). Students can prearrange a time to be at one of those locations and give Mom or friends a wave live from the campus.

This message is focused on growth with tradition. To assist with the growth of our student body in IE we will be searching for three new faculty members this spring. We are searching for faculty positions at the rank of Distinguished Professor to fill the John and Mary Lib White Systems Integration Chair, a Full Professor to fill a 21st Century Research Leadership Chair in the area of Analytics, as well as someone to fill either a senior Assistant or junior

Associate Professor position which will also be in the Analytics area.

The message of growth is relevant not only to the campus, but also to AAIE. The Academy has grown from 16 Charter Members to nearly 200 active members.

Next year as AAIE reaches a milestone (30 Years!), we will celebrate its growth and achievements. You are a group of dedicated and distinguished alumni who share a commitment to supporting, mentoring and advising the industrial engineering students and the department leadership. You are bringing new opportunities to students, enhancing their experiences, increasing their scholarships, and imparting a tradition of excellence in engineering.

Congratulations on building what is often referred to as ‘the best and model Academy’ in the college!

We hope you will plan to participate in the 30th Anniversary on April 8-9, 2016! It should be a fun, memorable event! A sincere thank you for all you do! .

“IE is growing with searches for three faculty members this year.”

ARKANSAS ACADEMY OF INDUSTRIAL ENGINEERING



**Warmly,
Edward A. Pohl, Ph.D.
Department Head and
21st Century Professor
of Industrial Engineering**



A4U: Recruitment, Retention and Readiness of Undergraduate Students

"All of our projects are student centered..."

The fall semester is underway, always a big time for the A4U Committee. All of our projects are student centered, and it is important to kick things off each school year in a big way. The A4U Committee had two new inductees from the 2015 Class join and provide great leadership. I can't say enough about the organizational skills and enthusiasm they have brought to the A4U team. I guess I shouldn't be surprised; after all, they are industrial engineers! Please take a moment to read the information below that details the great successes we have had so far this year.

Mentor Circles



Derek Malstrom
Mentor Circles Chair

Derek Malstrom accepted the chair position for this committee and did a great job organizing things. We ended up with a few more students and a few less mentors than last year (34 students and 24 mentors in 2014 versus 36 students and 22 mentors in 2015). Maybe we hit a steady state for this program that is entering its third year. The Mentor Circle program started with a kick-off meeting before the Texas Tech/Arkansas football game on September 19th. We had 9 mentors and 23 students participate in the kick-off. You can see a picture below from this activity. Although the football game didn't have the result we wanted, the Mentor Circle program

accomplished its goal of providing an opportunity for students and mentors to meet face-to-face. Meeting a mentor face-to-face is important because many of our mentors will conduct their meetings remotely via phone conferences. The 8 mentor circles that were formed will meet 2-3 times in the Fall semester and another 2-3 times in the spring.



Vance Clement
A4U Chair, BS '92

Mock Interviews

Mock Interviews were September 24, 2015 from 8:00 am – 2:30 pm. The U of A STEM Career Fair was held September 30th, and it is our goal to have the mock interviews before the career fair so that our students can excel at the fair. Karen Jewell accepted the chair position for this committee and took the program to new heights. Our usual partners supported this initiative: ABF, JB Hunt, and Wal-Mart, but we also added new interviewers from ConAgra, CapSpire, Harrison Energy and Tyson. We doubled



Karen Jewell
Mock Interviews Chair

(Continued on page 11)



Mentor Circle Participants Gather at the Kick-Off Meeting

Global Experience: Global Studies Taken to Another Level

Beginning in 2013 as an international cooperative education program (co-op), Walmart's International Division continues to partner with the U of A to create unique, hands-on international experiences for students. In January 2015, Walmart began sponsoring its second group of cooperative education students; an opportunity that is proving to be as rewarding as the first.

Within the current group of co-ops at Walmart, there are two University of Arkansas students. Claudia Chavez and Fernanda Suarez Claure are working on different six-month assignments to help optimize processes in Mexico Walmart stores (Walmex). The students are based in Bentonville, Arkansas and travel to Mexico for hands-on experiences throughout their projects.

Fernanda Suarez Claure's project helps improve daily cash processing activities by applying lean methodology while mapping business processes to identify inefficiencies. Her project will impact over 900 stores in four different store formats.

As Fernanda reflects on her experience, she says, "Taking on this co-op has been the most challenging, yet rewarding experiences of my college career. Working countless hours with your directors in the office and then with associates at the stores made this the most interactive and



Fernanda Suarez Claure

insightful experience. Walmart has certainly set the bar high for international co-ops because the exposure and responsibilities that I was given through this co-op made me feel like I was already a full-time associate."

Claudia Chavez's project improves scheduling methods for administrative areas in stores. She is updating standard procedures and defining workload measurements for each role for the implementation of a scheduling system in four different store formats. Her project simplifies the store associate scheduling process and saves time for managers. As Claudia reflects on her experience, she says "Experiencing both markets (United States and Mexico) has



*Ami Spivey
BS '95*



Claudia Chavez

given me a better perspective on the importance of time management, understanding cross-cultural markets, and developing relationships in a global enterprise."

Please go to the Global Experience tab (aaie.uark.edu/global-studies/) to find examples of how your company can provide Global Experiences for IE Students (senior design, co-ops, and internships). Global Experience needs company partners.

**Ami Spivey
Chair, Global Experience Committee**

"Creating unique, hands-on international experiences for students."

...MSOM Program: Value Through Efficiency

(Continued from page 1)

organizations. The curriculum has an IE perspective on OM and equips graduates to carry out their managerial responsibilities both more efficiently and more effectively. Students are able to select from 29 graduate courses to make up the ten required to complete the degree.

The curriculum is presented by outstanding faculty members drawn from the University's IE Department and from businesses throughout the country. Six IE faculty members and over 70 adjunct faculty members teach in the program. The program recruits business and military professionals who are academically qualified and have extensive experience in the specific subject that they teach.

Academic rigor is maintained by requiring applicants to possess a 3.0 GPA for admission and have both quantitative and qualitative pre-requisites to complete the program. While the program has an IE perspective, an undergraduate engineering degree is not required. Students from nearly every discipline have been successful graduates.

A strength of the program is the accomplished, responsive faculty and staff focused on meeting student needs. The program's assistant director for faculty development, Emily Nichols, has won the U of A Staff Senate Employee of the Quarter. Emily started her employment with the Department of Industrial Engineering while she was still in high school, working hourly through the summer. She continued to work hourly through the summers while working on her undergraduate degree at University of Arkansas – Fort Smith, and then throughout the year while she pursued her master's degree in Higher Education from the University of Arkansas.

A foundation of the program is continuous improvement, following the motto, "we practice what we teach". In 2014-2015, the program began offering advanced project management and began development of updated courses in change management, homeland security operations, analytics and lean systems to meet both student and industry needs.

For more about the MSOM program, go to operations-management.uark.edu

"A strength of the program is accomplished, responsive faculty and staff focused on meeting student needs."



Students and Staff at the 40th Anniversary Celebration

Profile of an AAIE Scholarship Donor

Who is the typical AAIE Scholarship donor? A student at a recent awards banquet told me, "They are the ones with grey hair wearing glasses". Hopefully this article will help dispel that generalization. As you see there is no typical AAIE donor. We are a true cross section of Academy members and friends and have different reasons for supporting students through scholarships. Below is a brief profile, and the first of more to come, of members who support AAIE Endowments. One of a group of more than 175 individuals making donations over the years.

Debrah Rolfe Brown

BSIE 1986, AAIE 2012
MBA 1992-Baldwin Wallace College, MSEM
1997-Wayne State University



Debrah Rolfe Brown

Debrah and her husband, James, have been married 21 years and have two children, Alanna, 18, who attends Spelman College and Noah, 15, a sophomore in high school. She lost the battle with her daughter but still hopes that Noah will become a Razorback. She joined Ford Motor Company in 1986 and states that her education and experiences at the UA enabled her to compete with some of the

brightest minds from across the globe. She says "My degree in IE exposed me to a variety of engineering disciplines that allowed me the flexibility to quickly adapt to a multitude of opportunities that fell outside the realm of what was considered a traditional IE role".

Debrah started her Ford career as an Industrial Engineering Analyst in a facility manufacturing Thunderbirds and Cougars and was quickly bitten by the automotive bug. There were so many opportunities within Ford that she has spent her entire career there. That career includes an impressive resume as a Design Engineer for Mustang, Supervisor Lean Production Programs and Vehicle Integration for Explorer, Engine Test Program and Project Management Supervisors for Econoline, and is currently Purchasing Strategy and Business Manager. The opportunities are endless with the right IE degree.

Debrah says, "Recognizing that any successes obtained are due to first God, then my family, and lastly the strong educational foundation achieved at the U of A. The strength of a school's alumni is an indication of the perceived value of a university. The scholarships and financial assistance I initially received as a freshman were the catalyst that made me believe that I could succeed. As a result I feel that it is extremely important for me to give back to allow other students to experience similar opportunities. It is not enough to simply take the knowledge obtained from the university, at some point we should feel compelled to reach back to assist others. It doesn't really matter how much each person contributes because if each graduate contributes, then it ensures that an IE degree from the University of Arkansas will continue to be a respected. Collectively our contributions will make a difference in helping another student achieve their dream".

Bob Etien, Chair, Scholarship Committee

"The scholarships and financial assistance I initially received as a freshman were the catalyst that made me believe that I could succeed."

“Please have a conversation with potential members about becoming an active member of the Academy”

To nominate new AAIE members, fill out the PDF nomination form available on the AAIE website:

<http://aaie.ineng.uark.edu/AAIE/Membership.html>

then email to:

**Karen Standley
standle@uark.edu**

or mail to:

AAIE
Dept of
Industrial Engineering
4207 Bell
Engineering Center
University of Arkansas
Fayetteville, AR 72701

Membership Committee

I am privileged to again serve as the Membership Chair for the upcoming year, which happens to be the 30th year for the academy. We had a great class of 14 new members inducted this past April. There are currently 8 nominees for the 2016 incoming class. We are close to achieving our annual new member goal of 10 for the 7th year in a row.

As you all are well aware, one of the most valuable ways to get involved with AAIE is to nominate someone for membership. We all know someone that we graduated with or have worked with that would be a great member. I appreciate all of you that have submitted candidates for membership in the academy. This will provide many of them the opportunity to re-connect with the Industrial Engineering Department. AAIE is one of the strongest Academies at the U of A and beyond. The inclusion of new members each year has allowed us to continue to assist the IE Department in becoming one of the best in the country.

Just to refresh everyone’s memory, the basic requirements for membership are:

- U of A IE graduate
- At least 15 years (2001 or earlier) since earning a degree
- Professional activities that attest to a distinguished record in their career
- Genuine interest in supporting the excellence in the U of A IE Department

Many of our members are in fields other than the traditional IE fields, such as healthcare, banking, business owners, and other meaningful professions.

Please have a conversation with potential members about becoming an active member of the academy. The discussion points to be used are (as shown at aaie.uark.edu/membership):

- Regular attendance at the annual Academy meeting.

- Annual contribution of Membership Dues and support for scholarships or departmental needs.
- Attendance at public forums as a representative of the College or Department.
- Assistance to the Department in seeking public/private support.



**Brian Noland
BS '81**

Each nominated candidate will be reviewed by the Membership Committee, then sent to the Academy Board for approval. After the Academy Board reviews and recommends nominees at the January 2016 meeting, a ballot will be sent to all active members for final acceptance.

If you think of someone who would be a great addition, please let us know. To nominate a candidate, please fill-out the nomination form at the link aaie.uark.edu/membership. Email the nomination to Karen Standley at standle@uark.edu or mail to:

AAIE
c/o Department of Industrial Engr.
4207 Bell Engineering Center
University of Arkansas
Fayetteville, AR 72701

Nominations due December 31, 2015.

To help with membership or for any questions, e-mail bnoland@prodigy.net or call 817-980-6538.

**Brian Noland
Membership Chair**

A4U Update (Continued from page 6)***Mock Interviewers Providing Students with a Face-to-Face Opportunity to Gain Experience***

the number of interviewers from 8 in 2014 to 16 in 2015. We were able to interview 40 students, and for the first time provide many of the students with interviews that had multiple interviewers.

We are doing our best to make the interviews as realistic as possible. The interviews were followed by a question and answer session where an HR professional from JB Hunt provided resume and interview tips and tricks. The students were also offered the opportunity to do a mock phone interview for the first time. These phone interviews will be conducted throughout the month of October.

Guest Lecturers

The Guest Lecturer program took a big step forward this fall. Biographies were written on the five AAIE members that volunteered. A guest lecturer booklet was put together and distributed to the entire IE Department at their fall planning retreat to help everyone identify potential guest lecturers. When a professor attends an out of town conference, we don't want them to cancel class. It's a great opportunity to bring in an AAIE member to simply supplement the students learning experiences with some real life examples

from an industry veteran. We will be tracking how many times the guest lecturers are used during the school year.

***Mock Interviews Q&A Panel Session*****Thanks for Your Participation**

These programs are only as successful as the effort put into them. AAIE members have answered the call by volunteering and continuously improving each one of them. Derek, Karen and I are very grateful for your time, energy and participation. If you have any comments or suggestions or would like to get further involved, please email me at vance.clement@gmail.com or call me at 901-351-9270 .

Vance Clement
A4U Committee Chair

“AAIE members have answered the call by volunteering and continuously improving each one of (these programs).”

We're on the web: aaie.uark.edu



**Arkansas Academy of Industrial Engineering
c/o Department of Industrial Engineering
4207 Bell Engineering Center
University of Arkansas
Fayetteville, AR 72701**

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The Arkansas Academy of Industrial Engineering (AAIE) was established in 1986 to recognize the achievements of University of Arkansas Industrial Engineering graduates and to provide continuing guidance and support to the Department of Industrial Engineering.

The Academy also provides its members with the opportunity to nurture and support the organization that played an important role in their professional growth and development.

THE DODECAHEDRON is a publication of the Arkansas Academy of Industrial Engineering, and the views expressed are those of the AAIE only and do not reflect the official view of the University of Arkansas, the College of Engineering, or the Department of Industrial Engineering. THE DODECAHEDRON is published semiannually and is intended for the membership of the Arkansas Academy of Industrial Engineering.

**You may contact
the editor at
Mike.Ogle@UNCC.edu**

The Editor would like to thank Tamara Ellenbecker for her final review to make this a quality newsletter that you all will value and for making sure it gets into your hands through every media method possible.