

A.E.S.

## INTEGRATIONS

APPLIED ENGINEERING SCIENCES PROGRAM

**Master's Degree Program in Operations and Engineering Management**

This program integrates the engineering and business education of MSU students to produce graduates who have a solid understanding of both engineering and business principles as they apply to operations management. Here is a recap of this opportunity and the requirements for this special program.

- The program is available only to MSU engineering graduates.
- Students must meet grade and prerequisite requirements.
- Students must enter the master's degree program within nine months of graduation; the program begins with the fall semester.
- Students take five classes (3 credits each) in the fall semester and five classes (3 credits each) in the spring semester.
- For more information on this master's program, contact Srinivas Talluri, director of the Master of Science in Operations and Engineering Management program, talluri@bus.msu.edu.

**AES Grads Take Advantage of Special Master's Program**

For many young people, a bachelor's degree, especially a BS in engineering, is all they need to start a career. But Ryan Tuck and Megan Ferber, both 2007 graduates of the Applied Engineering Sciences (AES) program, were not quite ready to step into the working world. They wanted something more from college before starting a career. A special program allowing them to get a master of science degree in operations and engineering management in two semesters has turned out to be just what they were looking for.

This master's program, available to MSU engineering graduates, is a nine-month lock-step program that is completed over the fall and spring semesters. Srinivas (Sri) Talluri, professor of operations and supply chain management in the Eli Broad Graduate School of Management, directs the program. "It allows graduates with good technical training to develop management skills. That's what companies want today," says Talluri. "The program covers all the

functional areas of business."

The program is unique because it is offered only to engineering graduates, not to graduates in other colleges. There are numerous requirements for entering the program, including signing up within nine months of graduation, having a 3.2 cumulative undergraduate grade point average, and having taken the prerequisites. If necessary, students who otherwise qualify but lack a couple of prerequisite courses can take them in the summer before the start of the master's program.

Both Tuck and Ferber entered the master's program in the fall of 2007 and received their MS degrees in May 2008, just one year after receiving their BS degrees. They already had positions with corporations and were excited about their career paths.

As incoming freshmen in the College of Engineering, they both registered as having "no preference" and both tried another major, but when they each independently heard about the AES program, they

*continued on page 3*

Ryan Tuck (left) and Megan Ferber (far right), who received their bachelor's degrees in 2007 in applied engineering sciences, with Srinivas Talluri, director of the Master of Science in Operations and Engineering Management program.

Photo by  
Harley J. Seeley





## from the Director

**LES L. LEONE**

**A**s you have probably read in other parts of this newsletter, I have announced my retirement from Michigan State University and the College of Engineering effective July 1, 2008. This announcement is given with mixed emotions as the past 37 years have been filled with a multitude of wonderful experiences, memories, challenges, and rewards. Over this period of time, I have had a chance to interact with some of the very best engineering educators and students in the world. I appreciate all of the opportunities to work in a wide variety of interesting and challenging programs, assignments, and responsibilities. It is very satisfying to contemplate the number of individuals that I have impacted and assisted in some way during my career. And for this I will be ever grateful to the College of Engineering and Michigan State University.

A major highlight of my career was when I assumed responsibilities for the Engineering Arts major in 2001, as part of a College of Engineering reorganization of several programs and departments. I was most excited for the opportunity to work more closely with a program that I have greatly admired since its inception in the 1970s. I was most eager to tackle the issues, concerns, and challenges in an effort to improve the program and its graduates.

One of my first tasks was to create an alumni advisory board made up of dedicated graduates who, over the past seven years, have graciously volunteered their time and talents for the betterment of their major. This group has assisted us in making several critical changes, including: the name change to Applied Engineering Sciences; strengthening the Business Supply Chain and Telecommunication cognates, increasing visibility to prospective students, alumni, and employers; creating communications tools such as the *AES Integrations*, the *AES "At a Glance"* brochure, and a new Web site; developing a program endowment fund to provide scholarship support to deserving AES students; and implementing several curriculum changes to position the program for review for ABET accreditation in 2010.

I am very pleased about the current state of the program. The curriculum is solid, the cognates are strong, employers are flocking to hire our graduates, co-ops, and interns, and the program is well positioned for success for students in the future. I'm confident the person who replaces me will share the same passion for the students and the success of the program.

My current plans are to spend time with my wife, Mary (a retired General Motors engineer of 32 years), at our retreat in northern Michigan. We plan on lots of traveling, and of course continuing to follow Spartan sports. I hope to remain in constant contact with my MSU engineering family: faculty, staff, alums, and of course students. While I may not be among you on a daily basis, you will forever be in my thoughts and memories.

Thanks for a great ride. I've enjoyed every minute of it. 🍀

## Les Leone: The Godfather of Applied Engineering Sciences

By Steve Trecha  
Chair, AES Alumni Board

**L**et me start by saying Les is one of the most purposeful and diligent men I've ever met. He has truly made an impact on his students, colleagues, the University, and me.

I was first introduced to Dr. Leone in 2002, near the time he assumed responsibility for the Engineering Arts program and the soon-to-be Applied Engineering Sciences Alumni Board. Having had the honor of serving on the AES board, I knew one thing about Les: he had vision. Equally important, he understood the immense value the AES program would offer students, as well as the companies they ultimately chose to work for.

Les's original vision articulated what the AES program can and should be. He saw the alumni board as an integral piece to achieving that vision, and it paid off. Simply put, Les ensured greater chances for success for his students by establishing AES at equal recognition and contribution levels with the engineering peer degreed programs at Michigan State University.

I can only imagine the difficulties and stress of navigating the university's massive infrastructure and policies to make the AES program a reality. Through his passion for student success and his love for MSU, coupled with sheer grit and determination, Les made it happen. His ability to remain customer-focused, positive, and practical in his approach has truly propelled the AES success.

In addition to being a visionary, Les embodies an entrepreneurial spirit and is a proven innovator. He readily introduced and accepted new ideas, always with the goal of creating greater value — value for students, value for the program, and value for MSU. He was never satisfied with what AES was, but rather looked forward to what AES could be. No question, Les rolled up his sleeves to make it happen and exemplified a Spartan engineering professor.

Above all, Les placed students first, and they knew it. Whether he was bringing real-life business experience to the classroom, designing relevant class work, setting up mentoring programs, promoting the student society, or simply lending a sympathetic ear, Les's students responded to him. In fact, many students have shared with me their thoughts and gratitude for Dr. Leone. From these conversations, it's clear that Les has instilled compassion, spirit, and goodwill as trademark behaviors for each student as they continue to grow.

As an educator, innovator, and administrator, Les demonstrated the leadership, intensity, insightfulness, vision, and integrity necessary for success. He is an honorable man, teacher, and mentor — and most of all, a valued friend. In my mind, he is, and will always be, the godfather of the Applied Engineering Sciences Program.

Dr. Leone, thank you.

*Steve Trecha has been chair of the AES Alumni Board for three years. He is the president and CEO of Integrated Strategies Inc. in Okemos, Mich. Steve received his BS in Engineering Arts from MSU in 1980 and his MBA, also from MSU, in 1982.*



**Steve Trecha**

# Les Leone Retires after 37 Years of Exceptional Service to Students

Les Leone, the 2008 winner of the Withrow Student Service Award and assistant dean for undergraduate studies, as well as director of the AES program, recently announced his retirement effective July 1, 2008. Leone has held almost every student service position in the college, bringing innovation and excellence to each. Over a 37-year span, he has assisted more than 10,000 Spartan Engineers in the pursuit of their degrees and careers.

Leone has received the American Society of Engineering Education's Alvah K. Borman Award and the Clement J. Freund Award for meritorious contributions to engineering cooperative education. He also received the Michigan Council for Cooperative Education's Don Hunt Service Award

for outstanding leadership in Michigan cooperative education, as well as MSU's Distinguished Academic Staff Award.

The Applied Engineering Sciences program will remain under the overall direction of Thomas F. Wolff, associate dean for undergraduate studies. His office has begun a search process for a new faculty-level position that would combine the directorship of the new Cornerstone (first-year) Engineering program and the directorship of the Applied Engineering Sciences program. In addition, the appointee to the new position would have an expectation of pursuing research related to engineering education and pedagogy. The position is targeted to be filled by the beginning of the fall 2008 semester.



Tom Wolff (left) presents Les Leone with the 2008 Withrow Student Service Award.

Photo by Harley J. Seelye

## Special Master's Program (continued from page 1)

decided it was a good fit for them. "I like talking to people. I wanted to use my technical background to do something in business," says Tuck "With the AES program you have a leg up on the traditional engineering students because of the supply chain classes."

Ferber has known that she wanted to be an engineer since high school. She loves math and science but, like Tuck, she wanted to combine a technical background with something in business. "The AES program is the best. It opens up all kinds of opportunities," says Ferber.

Because they had all the prerequisites for the master's program, both were able to do internships in the summer of 2007. Tuck had an internship with Dell Inc. in Austin, Texas. "The internship gave me a taste of both the operations and engineering sides of the business, and I decided I really like the engineering side better." He landed a full-time position with Dell in Austin and has joined the company as a quality assurance engineer, a job dealing with long-term problem solving, something he especially likes.

Ferber took an internship with S.C. Johnson & Son, Inc. in Racine, Wisc. She was excited about the opportunities that the internship provided

and wished she had had other internship experiences throughout her college career. S.C. Johnson offered her a full-time position, which she accepted. "Now I am ready to move along with a career," says Ferber, who is going into the supply chain side of the business as a vendor-managed inventory planner. She is located in Racine, near Milwaukee. Both Ferber and Tuck received excellent starting salaries, higher than they would have received with just a bachelor's degree.

"Our classes in this master's program fit nicely with what we did in our internships," says Ferber. "They are well organized and there is not much overlap." The classes are small, so there is excellent interaction with faculty members. While Tuck and Ferber were the only students in this master's program, they took some classes along with students who had accounting, business, advertising, and marketing undergraduate degrees.

The Operations and Engineering Management Master's Program includes 24 credits related to supply chain, three credits in finance, and three in management. "I liked the classes because we did a lot of case studies. It was very

interactive and I liked that," says Tuck. To finish out their master's program, Ferber and Tuck did a capstone project with Demmer Corporation in Lansing instead of writing a thesis. They worked with Demmer's management team to create a strategy map and balanced scorecard. That means applying the tools and concepts discussed in the classroom to actual business problems.

Their advice to other engineering students is to take a look at all the options as an undergraduate student. "The AES program may be a great fit for what you want to do in a career," says Ferber. The same applies as undergraduates approach graduation — look at what other options are available instead of immediately accepting a job. Tuck suggests that undergrads become involved with student groups, such as the Society of Applied Engineering Sciences, and complete as many internships as possible. "No internship is bad," he says. "You may not like a particular internship, but in the end that will be good background for making a career choice." ❁

— Jane L. DePriest

# AES Board: Muscle Building for the Program

Michigan State University's AES Alumni Board was established in 2002. Created by Les Leone, AES program director, the board is characterized as an active one. Meeting twice per year and continuing to develop and promote its activities throughout the year, the board is now focused on further building and promoting the AES Program at MSU.

The board focuses on the three primary areas of program support including endowment and research funding, working directly with the Society of AES student association, and alumni outreach. "We're motivated to aggressively promote the great successes of AES," says Steve Trecha, board chair and '80 AES alumnus. "We're building a strong support network and sense of program community for our students, alumni, faculty, and administration."

The board is a hands-on, active organization with three teams of board members. It operates under structured project management disciplines, including team charters, goal setting, project status, and performance reporting. The three teams, their charters, accomplishments, and plans are as follows:

## Alumni Outreach and Outcomes

**Team Members:** Monte L. Falcoff and Monica L. Braman.

**Charter:** To facilitate the means for AES alumni outreach and communication.

### Team Activities:

- Survey recent graduates to obtain feedback on AES program.
- Enhance awareness of AES Alumni Board activities with alumni.
- Increase visibility of AES program in MSU publications to alumni.
- Increase alumni participation in AES student mentoring project.
- Increase alumni participation in Alumni-Net networking database.
- Improve accuracy of alumni contact information.

## Student Outreach and Society Support

**Team Members:** Nathan Harrison, Chuck Kosmas, Robert Laug, and Ken Rossman.

**Charter:** To recommend and assist in programs to increase AES visibility to non-students; to promote the AES degree to non-college AES students; and to provide direct board linkage and mentoring support to the Society of Applied Engineering Sciences students and their e-board.

### Team Activities:

- Continue development and growth of the mentoring initiative to support students in their career development, career search, and identification of interests.
- Provide support and direction as needed for the Society of Applied Engineering Sciences; provide contacts and topics to facilitate successful meetings throughout the school year; identify and leverage communications with students to maintain open dialogue and ensure the board is meeting students' needs.
- Provide recognition for those students who have been actively involved in the society and meet specified criteria. Recognition of students takes place at the last SAES meeting of the year when students receive a certificate. Additional means of recognition are being identified to ensure greater visibility for those students who earn the award.

## Endowment and Research Funding

**Team Members:** Holly D. Aikens, Jeff Brown, Shelly Chawla, and Steve Trecha.

**Charter:** Establish endowment and undergraduate research funding goals for the next five years. Support the University Development programs in fund creation efforts. Assist in the definition, design, and execution of corporate funding programs.

### Team Activities:

- Three (\$1,000 each) scholarships are now offered out of the endowment fund. As the fund grows the amount and number of scholarships can increase.
- The team is working toward getting corporations to sponsor capstone projects and support the AES Society.

"We are a powerful team, which operates in the program support and advancement modes," notes Trecha. We are reaching out to our alumni to support the program through endowment and research sponsorships and contributions, checking out and updating alumni profiles on the AES Web site ([www.egr.msu.edu/aes](http://www.egr.msu.edu/aes)), serving as student mentors, and/or participating on the board.

Alumni, do you want to help? You can reach Steve Trecha at [strecha@sourcing.com](mailto:strecha@sourcing.com), or at 517-381-4800 x-219. He would be happy to help you get involved in building further value into the AES program.

# Alum Net

## Connect with Old Friends and Classmates

Have you tried the College of Engineering alumni networking site — Alum Net? This on-line service allows registered alumni to create and edit a profile, as well as to search for other alumni profiles. We hope that many alums will become part of this growing network and community among MSU EGR alumni. We encourage you to participate and get involved in the MSU EGR alumni community. For your protection, all entries posted to the Web site will be screened prior to activation.

To register, visit <https://www.egr.msu.edu/alum-net>. After your profile is approved, you will be able to connect with former classmates and MSU Engineering alumni.

## Facebook Comes to AES

There is now an additional way to connect with the AES program. Through the work of the Society of Applied Engineering Sciences (SAES) and the AES Alumni Advisory Board, there is now a Facebook community for the AES program. Named the MSU AES/EA Community, this site is open to all friends, students, alumni, and MSU faculty and staff as another way to connect and network.

If you are a Facebook user, visit the MSU AES/EA Community and post your profile. If you are not a registered Facebook user, go to [www.facebook.com](http://www.facebook.com) and sign up as a new user.

## New AES Program Web Site

Have you checked out the new AES Web site? It was launched last fall and is designed to be used for marketing and promotion of the program to current and prospective students and their families, as well as employers and alumni. In addition to a broad description of the program and the cognates, the site provides specific information about the program. There are links and tabs to the latest AES brochure, degree requirements, news, events, job opportunities, and a special section for alumni. We encourage you to visit the site at [www.egr.msu.edu/aes](http://www.egr.msu.edu/aes).

## AES Participates in Design Days



The winning team from the AES capstone project. From left: Pamela Wickersham, Les Leone (director of the AES Program), Danielle Smith, Dan Pabst, Jeff Gauthier, and Mike Thornton.

For the first time the AES program joined with other departments in the College of Engineering in participating in the spring 2008 Design Days. "This event is a great opportunity for our graduating seniors," says Robert Chalou, academic specialist and the lead instructor for EGR 410, the AES senior capstone course.

The course, which is offered only in the spring semester to graduating seniors, prepares students for future employment with a team-based experience. Students explore societal issues and arrive at an optimal choice using various decision-making processes. "This allows team members to choose real-world problems to address and lets them use their technical skills to make educated choices," says Chalou, who was impressed with the presentations of all five AES teams. In the past, student teams gave presentations in class to other students. By participating in Design Days, held April 24 and 25 at the MSU Student Union, students had a larger audience for their presentations with visitors, parents, and others listening to their ideas.

The audience voted on the team presentations and **Team 5** was given the award for the most outstanding presentation. That team looked at revamping the AES program. Team members included **Jeff Gauthier, Dan Pabst, Danielle Smith, Mike Thornton, and Pamela Wickersham.**

**Team 1** looked at childhood obesity. Team members were **Jeffrey Deans, Joe Ludlow, Kirk Priem, Ebony Thomas, and Adam Tyler.**

**Team 2** took on the topic of children's health care in the U.S. Team members were **Jillian Ashburn, Patrick Eding, Rahul Menon, Nick Smith, and Kamela Webster.**

**Team 3** offered ideas for scrap tire recycling. Team members were **Troy Bigham, Zach Domitrz, Demetrius Fisher, Joe Larkin, and Aki Tanaka.**

**Team 4** discussed the future of automotive recycling. Team members were **Eric Dragicevic, Michelle Murphy, Bret Pelavin, Ashley Seidl, and Phil Tambouridis.**

## 2008 Academic Awards

Congratulations to the following students from the Applied Engineering Sciences program who were recognized at a College of Engineering reception in March for academic excellence and service to the community.

**Undergraduate Academic Achievement Awards:** Nicole Currie, Eric Dragicevic, Kelsi Franckowiak, and Thomas Hull.

**Service Award:** Ashley Seidl and Kamela Webster.

**2007-2008 Ambassador:** Jessica Schmansky.

### 2008 Alumni Board Recognition

At its April meeting, the AES Alumni Board recognized eight students for their dedication and contributions to the Applied Engineering Sciences Society. The students honored were: **Matt Beabout, Lisa Dabkowski, Kelsey Johnson, Steven Moyers, Jessie Schmansky, Ross Scott, Brad Zonca, and Jon Wiita.** Congratulations to all!

### College Launches "Women in Engineering" Program

Nationally, the number of women enrolling in engineering programs is dropping. It's a trend that the MSU College of Engineering would like to reverse. To that end, the college recently launched a new Women in Engineering (WIE) program. "Women are very under-represented in the field of engineering. And the numbers are dropping," says Judy Cordes, coordinator of the new program in the College of Engineering. "If we don't recruit women into engineering, we won't have enough engineers to fill the need in the future."

Fewer women across the nation are choosing careers in engineering today. At the K-12 level, girls usually don't consider engineering as a career choice simply because they aren't familiar with what an engineer really does.

In some engineering disciplines – such as chemical engineering and the biomedical area – women are better represented. "But if you look at the classical disciplines of engineering, we have done a lousy job of communicating to women that it's a good profession," says Satish Udpa, dean of the College of Engineering.

The mission of WIE is to encourage women of all backgrounds to pursue careers in engineering, and to provide opportunities for academic, personal, and professional growth. The intent of WIE is to reach pre-college students, women who have been admitted to the college, and currently enrolled women. "It's about getting women into engineering majors-- hopefully at MSU, retaining them through graduation, and getting them working in the field of engineering or into graduate school," says Cordes.

While WIE targets women, the program is open to everyone — men and women.

For more information, visit the Web site at <http://www.egr.msu.edu/wie>.



A "Future Engineer" stops at the Women in Engineering table to pick up information during the Future Engineers Open House, sponsored by the college.

Photo by Harley J. Seeley

# KEEPING IN TOUCH

NAME \_\_\_\_\_

STREET ADDRESS \_\_\_\_\_

CITY / STATE / ZIP \_\_\_\_\_ IS THIS A NEW ADDRESS?  YES  NO

OFFICE TELEPHONE \_\_\_\_\_ HOME TELEPHONE \_\_\_\_\_

E-MAIL \_\_\_\_\_

GRADUATION YEAR \_\_\_\_\_ DEGREE \_\_\_\_\_

CURRENT OCCUPATION \_\_\_\_\_

EMPLOYER \_\_\_\_\_ LOCATION \_\_\_\_\_

News of recent accomplishments, awards, or promotions (Use separate sheet if needed):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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My/our total gift will be paid as indicated:

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NAME AS IT APPEARS ON CARD \_\_\_\_\_

SIGNATURE \_\_\_\_\_

A pledge of the following duration (maximum 5 years): \_\_\_\_\_ Enclosed is my first payment of \$ \_\_\_\_\_ Please send pledge reminders:  Annually  Quarterly  Semiannually beginning: \_\_\_\_\_ MONTH YEAR

- This pledge replaces all other outstanding pledges.
- This is a joint gift with my spouse: \_\_\_\_\_ SPOUSE’S NAME

I or  my spouse (check one) works for a matching gift company:

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Please return to: Engineering Development, MSU, 3536 Engineering Building, East Lansing, MI 48824-1226, or make your gift online at [www.givingtomsu.edu](http://www.givingtomsu.edu)

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Photo by Harley J. Seeley

Eryn Richmond, AES senior, talks to Bryan Keys, regional commodity manager – plant service council, with Alcoa about an internship during the Engineering Expo held in February. More than 800 students attended the event with more than 120 organizations participating. Described as a “laid-back career fair,” Engineering Expo provides a venue for students to explore career options in technology and manufacturing, network with professionals and alumni in the field, and gain advice about career preparation. It’s also an opportunity to secure co-op, internship, or full-time positions.

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