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Ole Miss Engineering Illustrated

BEHIND THE MAGAZINE COVER

Based on the message heard regularly in conversations among alumni, the Ole Miss Engineer committee arrived at the theme of the 2015 edition: Engineering transforms lives. What better way to illustrate a transformer than by depicting “Optimus Prime” on the Ole Miss Walk of Champions!

For those who don’t know or need a recap, Optimus Prime is a fictional character from the “Transformers” movies directed by Michael Bay. As leader of the Autobots, a faction of conscious, vehicular-transforming robots from the planet Cybertron, Optimus Prime is depicted as possessing tremendous leadership qualities and strong moral character, not to mention powerful martial arts skill and advanced alien weaponry. Most notably, Optimus Prime is dedicated to building peaceful coexistence with humans and seeks the protection of life and liberty for all sentient species. When facing a civil war with the villainous Decepticons, the other faction of alien robots that can disguise themselves by transforming into everyday machinery, Optimus Prime is remembered for his charge to his allies: “Fate rarely calls upon us at a moment of our choosing.”

While our mission at the School of Engineering isn’t to defeat the Decepticons, and whether fate has anything to do with it, we do have some real-life transformers, known around the world simply as engineering alumni and friends.

We’ve selected stories on alumni and friends who are making educational and career opportunities possible through various means, and ultimately transforming engineering students’ lives. We’re grateful to those alumni, friends, students and professors who were willing to be interviewed and share their life-transforming experiences for Ole Miss Engineer. We know many more transformers and transformed are out there.

Enjoy this year’s magazine.

Miss an issue?
Visit engineering.olemiss.edu/news/olemiss_engineer to view past magazines.
REAL-LIFE TRANSFORMER

3-D printed prosthetic hand created for first-grader

BY BENITA WHITEHORN

Three-dimensional printers truly are transforming what's possible in manufacturing, research and development, the military and even health care. Case in point, first-grader Braden McCay, who was born without a left hand, will soon have a prosthetic hand created from a 3-D printer, thanks in part to University of Mississippi School of Engineering adjunct professor Marsha Hobbs.

Two years ago, the School of Engineering partnered with Jackson Preparatory School to offer the dual enrollment courses Introduction to Engineering 100 and Engineering Graphics 207, and Hobbs’ engineering graphics class at Jackson Prep, dubbed the “Fab Lab,” uses a 3-D printer as a part of learning AutoCAD.

When prosthetist Rick Psonak found out a 3-D printer was housed at Jackson Prep, he asked Hobbs if she’d be willing to produce a hand with it for McCay. Despite initial reservations, Hobbs accepted the challenge, and she and one of her students, senior Matthew Clay, worked on crafting the hand.

“I thought it was going to be really hard, but once I investigated the open source resources, I realized we had the resources we needed to complete the project,” Hobbs said.

Using ABS plastic, Hobbs and Clay printed the pieces Psonak asked them to print, assembled them using Chicago screws and prepared a prototype for McCay to try on. Some of the parts are on a pulley system and are being fine-tuned. When McCay bends his wrist forward, the hand closes; when he moves his wrist backward, the fingers open.

The 6-year-old got to pick out the colors for the hand, including his school (Madison Station) colors: orange and blue. He took the prototype to school and said his friends think “it’s cool,” and he does too.

“Very cool,” said McCay, “because you can make it any color, and it helps me with stuff.”

“You can call us Autobots”*

First-grader Braden McCay transforms like ‘Optimus Prime’ with his new prosthetic hand created from a 3-D printer.

McCay and his transformer team, Rick Psonak and Marsha Hobbs

“From the movie ‘Transformers’
DEAR ALUMNI AND FRIENDS OF OLE MISS ENGINEERING:

We continue our tradition of presenting a theme for each issue of Ole Miss Engineer magazine. The theme for this issue is “Engineering transforms lives,” meaning that lives have been and are being transformed here through the opportunities created by the good deeds of others. Generations of students have received scholarships to make their education possible, thanks to the generosity of many donors. Many of the beneficiaries have become donors themselves, forming a virtuous cycle.

Each fall, the university holds a Donors Appreciation Day in the Carrier House, which is the chancellor’s residence, to celebrate donors’ generosity. The School of Engineering is asked to provide a display of milestones. Let me use this opportunity to share with you milestones from the past five to six years:

1. **Facilities:** In 2010, a major renovation was completed on the Old Chemistry Building, originally built in 1920. The building was rededicated as Brevard Hall to honor the Brevard family and designated as the flagship building of the School of Engineering. In 2011, a wing was added to Carrier Hall.

2. **Student Accomplishments:** Many engineering students have received national recognition, including being selected as Tau Beta Pi (engineering national honor society) laureates and Goldwater, Fulbright and Gates Cambridge scholars. Chemical engineering students won first place in 2009 and second place in 2011 in the American Institute of Chemical Engineers National Student Design Competition, and ranked sixth in the nation for the total number of awards won.

3. **Enrollment:** Engineering undergraduate enrollment surpassed 1,000 for the first time in 2012. By the time you receive this magazine, we anticipate an undergraduate enrollment of more than 1,500 and total enrollment of 1,700, more than double the enrollment from five years ago. The freshman ACT score average also went up by more than two points during this period.

4. **Alumni:** Engineering alumni continue to be successful in their professions. To provide one example, Bill Parsons serves in a leadership role in the nation’s space program. As NASA space shuttle director, he successfully returned the shuttle to flight after the Space Shuttle Columbia disaster. He subsequently served as director of Kennedy Space Center, vice president for strategic space initiatives at Lockheed Martin, and currently is president and CEO of RD-Amross, a U.S.-Russian joint venture that supplies rockets to take astronauts to the International Space Station.

5. **Student Support:** An alumni-based Woods Society fund was established in 2013 to support student activities. With 60 members at present, each member contributes $1,000 or more a year to the fund. The fund supports students to participate in regional and national society competitions, attend professional society meetings for career and networking opportunities, present undergraduate research at national
conferences, and undertake service projects, among many other activities.

6. STUDENT SERVICE: Students are active in service and participate in the school’s Engineering Service Corps. Particularly, an Engineers Without Borders chapter was founded in 2012 and has been committed to projects in Togo, West Africa, one of the poorest nations in the world. Student and faculty teams have visited Togo several times and completed a concrete building to replace a storm-destroyed schoolhouse (students had been holding classes under a tree). The current project is to drill a deep well for clean water and establish a water distribution system.

7. FACULTY DEVELOPMENT: To recognize faculty excellence and retain faculty, the Brevard Family Chair in Civil Engineering, the first endowed chair in school history, was established. The first chair was appointed in 2014.

8. SCHOLARSHIP ENDOWMENT: The Elsie and Harper Johnson Jr. Scholarship was established as the third scholarship endowment topping $1 million at the School of Engineering (after Adler and Brevard Scholarship endowments).

9. FACULTY PERFORMANCE: Engineering faculty won both the university’s highest annual teaching award, the Elsie M. Hood Outstanding Teacher Award (O’Haver, 2012), and the highest annual research award, the Distinguished Research and Creative Achievement Award (Wang, 2008; Elsherbeni, 2012). The civil engineering graduate program won the university’s Diversity and Inclusiveness Award (2015).

10. DEGREE PROGRAM: The Bachelor of Science in Geological Engineering became the largest ABET-accredited geological engineering program in the nation in 2013, surpassing the historically largest program at the Colorado School of Mines.

I am pleased to share these exciting developments at the school with you.

ALEX CHENG
Dean of Engineering
Scholarships and other funds play a major role in helping dedicated students earn their degrees at the University of Mississippi. Such was the case for recent UM graduates Jacob “Jake” Moorhead (BSME 15), Jonathan Jones (BSChE 11), Christopher “Jack” Coffin (BE 15) and Stephen Karpenko (BSGE 15).

A Water Valley native, Moorhead graduated, debt-free, with a Bachelor of Science in Mechanical Engineering with an emphasis in manufacturing. As an entering freshman, he received three academic scholarships, a Center for Manufacturing Excellence Scholarship and the William B. Turner Scholarship through the Ole Miss Women’s Council. Later, Moorhead received the Mississippi Automobile Manufacturers Association Scholarship and the Mississippi Engineering Society Scholarship. He completed two summer engineering internships with Caterpillar HPE Group in Oxford and continued to work there part time during his senior year at Ole Miss.

“I knew that I had to work hard at keeping my grades up in order to continue receiving these scholarships,” said Moorhead, who has accepted a job offer with Caterpillar Inc.’s Leadership and Technical Development Program in Peoria, Illinois. “The opportunities that scholarships offer are too important not to want to do your best. A good education can lead to a good job, a good income and a good life. The internships and work opportunities have helped me financially and have given me valuable hands-on experience that will help me tremendously as I go forward in my career.”

Jones, founder and first president of Engineers Without Borders-Ole Miss chapter, accepted scholarships from UM’s Sally McDonnell Barksdale Honors College and OMWC. The Bachelor of Science in Chemical Engineering graduate also worked as a lab research assistant and received other funding while at UM.

“I was a recipient of an Ole Miss Women’s Council for Philanthropy scholarship – the Mitchell-Marquette scholarship,” said the Gulf Coast native. “In addition to the great financial support, the OMWC provided regular mentoring and monthly group dinners where we heard great speakers, including chancellors (Robert) Khayat and (Dan) Jones, (coaches) Mike Bianco and Billy Chadwick, entrepreneurs and corporate executives, and even Nashville songwriters Gordon Kennedy and Wayne Kirkpatrick. Tremendous experience.”

Jones also took advantage of the Mississippi Tuition Assistance Grant and Mississippi Eminent Scholars Grant, and as a student was awarded the Omicron Delta Kappa and the David W. Arnold scholarships.

“While at school, I interned in the Green Initiative, and explored solutions to monitor the university’s power usage and move towards a lower energy footprint,” he said. “I interned with ExxonMobil in New Orleans, where I worked as a process engineer in the aramids plant. Lastly, I spent a year with the UM [Center for Mathematics and Science Education]. These were rewarding experiences, and they certainly helped financially during my years in school.”

Between pharmacy and engineering, Jones chose chemical engineering because he loved the adventure in solving new problems using science.

“This has certainly proven to be the underlying theme in the four years I have worked as an engineer with DuPont since

In addition to the great financial support, the OMWC provided regular mentoring and monthly group dinners where we heard great speakers, including chancellors (Robert) Khayat and (Dan) Jones, (coaches) Mike Bianco and Billy Chadwick, entrepreneurs and corporate executives, and even Nashville songwriters Gordon Kennedy and Wayne Kirkpatrick. Tremendous experience.”

— Jonathan Jones
I visited campus, connected with a department that captured my attention, found a way financially to make it work and was totally sold.”
— Stephen Karpenko

graduation,” Jones said. “Next up, I am going to be starting medical school in the fall at South Alabama, and I hope to find some research work to get into, possibly in hematology, where I can apply my chemical engineering background.”

A Bachelor of Engineering graduate commissioned as an officer in the U.S. Navy, Coffin came to Ole Miss on a Naval ROTC scholarship. This scholarship covered tuition and provided a small monthly stipend for books and other expenses. Coffin was also awarded a small academic scholarship as a Provost scholar.

“In addition to these scholarships, I worked seven jobs during my four years at Ole Miss,” the Ruckersville, Virginia, native said. “These were American First Fencing Co., construction, community assistant, lifeguard, swim instructor, bouncer and musician.”

Raised on his family’s 100-acre horse farm by his father, Tad Coffin, an Olympic equestrian gold medalist, Coffin learned the importance of hard work from an early age.

“For two years, I was working three jobs simultaneously,” he said. “In addition, I took 17 credit hours of engineering classes and ROTC.”

By doing so, Coffin was able to become financially independent from his parents, who were paying for his other three siblings to go to college.

“It was my goal to make this financial burden a little lighter for them,” he said. “Between the scholarships and the jobs, I was able to graduate college debt-free.”

Coffin chose to major in general engineering with an emphasis in naval science because it increased his chances of picking up a Navy scholarship.

“Eighty percent of Navy scholarships are awarded to engineers, and the emphasis on naval science allowed me to use my ROTC classes towards my major and graduate on time – without spreading myself too thin,” Coffin said. “As an ensign in the United States Navy, I will be reporting to Coronado, California, for Basic Underwater Demolition school, where I will begin training as a naval special warfare officer.”

A Bachelor of Science in Geological Engineering graduate, Karpenko received an Academic Common Market out-of-state tuition waiver. He also assisted with course development and was a teaching assistant for two full years.

“I became interested in Ole Miss after hearing nothing but good things from students, alumni and just people who have visited Oxford,” said the Franklin, Tennessee, native. “After taking a tour of the school, I knew it was where I wanted to go. I believe the saying is, ‘If you don’t want to attend Ole Miss, then don’t take a tour.’”

Karpenko said that geological engineering caught his attention immediately when taking a tour of the engineering school and talking to a few of the professors.

“After hearing about the hands-on experience it offered with all of the trips you get to take, I was sold,” he said. “The field trips and field camps brought me closer with the professors and classmates. This made going to class that much more enjoyable, when you get to see and talk to your friends and mentors.”

Karpenko helped assistant engineering dean Marni Kendricks in the design of a Web-based AutoCad course. He was also a teaching assistant for the course.

“These scholarships, co-ops and work opportunities helped tremendously in allowing me to finish my degree in geological engineering,” Karpenko said. “After graduation, I plan on moving to Nashville and pursuing work in the geotechnical field.”

Ole Miss
While most young college graduates are focused on climbing the ranks at their first job and adjusting to post-college life, young alumni who received scholarships to attend the University of Mississippi’s School of Engineering are focused on giving back.

Kimberly Thames Padeletti, Casey Wilson Pearce and Pablo Mariaca said giving back to the school, where they received their foundation for success made possible through scholarships, is important to them. They want to bolster the school because they believe it has a lot to offer: small class sizes but part of a large university with a strong liberal arts base, honors college and great campus life.

Alex Cheng, UM School of Engineering dean, said it’s touching to see former scholarship recipients give back to the university to help others in the same way they were helped.

“At a time when it would be natural to indulge in a little luxury, our best graduates are surprisingly generous with their time and financial support,” Cheng said.

Some alumni have chosen to join the Woods Society, which is named for Jess Woods, who was UM student body president for the Class of 1956, a Rhodes Scholar with a perfect 4.0 grade-point average and a member of the Naval ROTC, among other achievements. The Woods Society funding supports scholarships, technology upgrades, internships, career fairs, professional society competitions, Engineers Without Borders, undergraduate research and other programs and initiatives through annual donations of $1,000 or more. Other alumni have established their own scholarship programs.

BENEFACTOR OF HIGH-CALIBER HIGH-SCHOOLERS

Kim Thames Padeletti, who graduated from UM in 2006 with a degree in chemical engineering, now works in process engineering and risk management for BHP Billiton in Houston, Texas.

Padeletti, a native of Ocean Springs, graduated from the Mississippi School for Mathematics and Science before attending UM, so she established a $2,000 scholarship to help MSMS students attend UM’s School of Engineering. To be considered for the scholarship, applicants must score a 27 or higher on the ACT and write a summary of their academic, extracurricular and leadership activities.

Padeletti received scholarships when she was a student, but she believes MSMS grads may be overlooked for “class top 10 percent scholarships” sometimes because of the high caliber of each student. Many of the students there would be the valedictorians of most other schools, but they may not always get the funds that valedictorians at other schools receive.

“I had engineering scholarships at Ole Miss, and I wanted to find a way to give back to both schools,” Padeletti said. “MSMS is a challenging and competitive school, and the scholarship is a good way to lead (its students) into engineering at Ole Miss.”

Steering students toward UM is important because of the quality of the
I believe in the setup of the Ole Miss engineering school. You get more one-on-one attention and more hands-on research opportunities. It’s great if you’re looking for a smaller engineering school with smaller classes embedded in a larger university setting.” — Kim Thames Padeletti

I was a beneficiary of every aspect of this constant support. So, it was just logical to give some scholarship money to Engineers Without Borders when I had the chance. It was nothing compared to the benefits I got and the things I learned from being involved with them.”

— Pablo Mariaca, project engineer, Jacobs
Ole Miss engineering runs in the blood

By George Atkins

UM School of Engineering alumni have long thought of themselves as a family: close-knit, supportive and actively interested in the next generation. Coincidentally, some of the school’s alumni are family by blood as well. Some of them shared how their family ties influenced them to be part of the Ole Miss engineering family and how those ties affect their commitment to the future of the program.

Fathers and Sons
William “Butch” Porter (BScvE 71) followed in his father William’s (BSChE 37) footsteps, first to Ole Miss and then to Piggott and Porter, an engineering firm his father had helped found in 1948. In 1980, he took over the firm, which he renamed W.H. Porter Consultants, and was later joined by his two sons, Henry (BScvE 05), also a civil engineer, and William David III, who handles land management for the company. Both attended Ole Miss.

Porter directly connects one of his firm’s crowning achievements, the award-winning Wolf River Boulevard, in Germantown, Tennessee, to his UM degree. “I think our engineering school, allowing for a more heuristic approach,” said Porter, adding that the school helped him not only address the “hows” of technical construction issues but also explain the “whys” to various civic, municipal and industry boards.

“One Ole Miss graduate can talk!” Porter said.

He said one accomplishment during his long tenure as an Executive Advisory Board member was helping the school achieve a top 5 percent Accreditation Board for Engineering and Technology (ABET) ranking, which he attributed to the dedication of the professors and the enthusiastic involvement of alumni.

When asked about the importance of family in the alumni group, Porter said, “My father graduated with Joe Eliauderdale. I graduated with his son, Joe Frank. Now we both sit on the EAB.”

Mother and Sons
Deborah Kaufman Martin (BScvE 75) had planned to be a pre-med major until she discovered there would be a cat dissection involved.

“My father was a civil engineer,” she said. “[He] was the assistant chief of engineering for the Lower Mississippi Valley Division of the Corps of Engineers in Vicksburg. He suggested that I change my major to civil engineering due to my love of math. It was the perfect match for me.”

Upon graduation, Martin also joined the Corps of Engineers’ Waterways Experiment Station. After her marriage to Lee Martin in 1978, she said her engineering degree allowed for mobility and flexibility.

“After we were married and moved to Bryan, Texas, then to Denver, Colorado, and to Natchez, I worked part time from home, writing engineering computer programs for many years. It was a very rewarding career for me to be able to use my engineering degree and be home to raise my family.”

That family includes two sons, Christopher (BScvE 04) and Geoffrey (BScvE 13). Christopher also graduated from UMMC in 2009. Geoffrey received an MBA in 2015.

“We all remain extremely interested in the engineering school,” Martin said. “It has been a wonderful building block in the education of myself and my two sons. In addition, we are always on the lookout for prospective high school students who we can point toward Ole Miss and engineering. ... Hopefully, all...
three of us will be good ambassadors and recruiters for Ole Miss.”

Although she officially retired from the Corps this past June, Martin has found that her engineering muscles are not in any danger of atrophy.

“Everyday life revolves around different types of engineering,” she said. “Although I am no longer actively employed, I use my degree in civil engineering daily, whether with my appointed position on the Natchez Planning Commission, working with Cathedral School and [its] website and technology department, or just managing our home. Engineering is more important than the average person realizes.”

SISTERS
Damon Wall, longtime UM engineering professor and assistant dean, left an enduring legacy from his many years with the school, which included three of his daughters – Beth Touchstone (BSCS 78), Cindy Rich (BCSCE 80) and Patty Bowman (BSCS 83) – earning degrees from the School of Engineering. Although he didn’t insist upon their enrollment in Ole Miss, with five children to educate and the university’s faculty free-tuition policy,
he did point out the advantages of certain UM programs. In fact, he was the one who steered the oldest, Beth, into the field of computer science because of her love of math.

“This was really the very early stages of the computer science program,” Touchstone said. “PCs weren’t even invented yet. My dad advised me this was the wave of the future.”

As history has shown, father knew best. A minor in accounting made Touchstone a very marketable graduate, and she worked for IBM for 10 years until she became a full-time mom.

By the time Rich graduated from high school, she had a father and a grandfather on the faculty of Ole Miss engineering. She decided to follow her grandfather’s discipline, choosing civil engineering. She is a vice president at civil engineering firm Neel-Schaffer and has won several awards including being named 2015 Engineer of Distinction. She also served on the UM Engineering Advisory Board.

When she entered Ole Miss in 1979, Bowman chose computer science partially because she wanted to emulate her sister but also because she was attracted to a new and exciting industry. She also heeded her father’s advice regarding careers.

“Dad was pretty clear about getting an education that would give you independence and a path to take care of yourself,” she said.

Bowman has worked with such industry giants as AT&T, Accenture and Blue Cross Blue Shield. She said the problem-solving skills she learned at Ole Miss allow her to remain on top of her game in an industry that has changed drastically in the last 30 years.

The sisters now have their own children who are engaged in engineering, and they established a scholarship in their father’s name that will ensure his legacy at Ole Miss continues.

BROTHERS
Like the Wall sisters, brothers Charles “Chuck” Smith (BSEE 83) and Steve Smith (BSEE 93) followed their father, late chair of electrical engineering Charles E. Smith, into the profession. They parlayed their Ole Miss degrees and entrepreneurial spirit into C&S Consolidated, which holds several businesses specializing in control systems integration and ozone generation systems.

Their success has allowed them to support the School of Engineering through various philanthropic efforts such as the Charles E. Smith Engineering Science Building, which honors their father, and membership in the Woods Society. They also sponsored a summer math camp at Ole Miss through their company Guardian Manufacturing Inc.

In addition to their financial support, they’ve contributed their time and resources to the school. They’ve provided lecturers for the Dean’s Leadership class, sent specialized equipment to help train students, and served on the Executive Advisory Board and the Vision Council.

The Smith brothers echoed a common thread among all the families interviewed: that an Ole Miss engineering degree gives its graduates more than just technical skills. As Chuck Smith noted, when you graduate from this program, “You’re going to be more than just an engineer – quite a bit more.”
Meeting and knowing Robert M. Carrier has made me realize more than ever that I should have followed the advice given me as a young man by the late Dr. Frank L. McVey, then President of the University of Kentucky, to the effect that I should keep a diary. At the time I could see nothing that had happened worthy of record for posterity either because of its human interest or historical importance, and a careful survey of my prospects revealed no compelling reasons for undertaking such a task. Certainly I saw nothing on the horizon to justify keeping a diary.

What I am writing is what I remember and in some respects may be more accurate than a diary since it has been somewhat refined by the processes of reflection, but it will suffer from lack of precise data as to dates and details of specific experiences.

Soon after we moved to the campus, I learned of Mr. Carrier’s interest in the athletic teams of the University. Mr. Jeff Hamm, Mr. C. M. (Tad) Smith, and the coaches were his friends, and I was anticipating with great interest...
the opportunity to meet him. Not long after, Dr. John Culley called me to say that Mrs. Williams and I had been included in a small party invited to “Barnacre,” then the home of Mr. and Mrs. Carrier, for an afternoon and dinner. It was then that my admiration and respect for the man began to take form and substance. “Barnacre” was beautiful. Its two most outstanding characteristics were comfort and beauty. The provisions for hunting, fishing, and swimming indicated the man’s great interest and love for the out-of-doors and amateur sports. The grounds, library, pictures, and house furnishings were evidences of his and Mrs. Carrier’s broad interests, extensive travels, and interest in people. Mr. and Mrs. Carrier have a wide circle of friends. The genuineness, thoughtfulness, and generous hospitality make all who have experienced it marvel.

Several years had passed since the dinner at “Barnacre.” Hardly a month would pass but my wife and I would remind ourselves that we wanted to have the Carriers as our guests in the Chancellor’s home on the campus. Finally, a luncheon date was set. Mrs. Carrier could not accept, but Mr. Carrier could. Since Mrs. Carrier could not be with us, we decided to make it a stag affair and have some of those men that Mr. Carrier would enjoy most. I do not remember all present, but I do recall several and the reasons for inviting them. Mr. James McClure of Sardis was a close friend and so was Mr. Luke Frederickson, Doctor Culley, Coach Vaught, Tad Smith, Jeff Hamm, and Doctor Bickerstaff would add the sports flavor that Mr. Carrier would like; Dean Fred Kellogg of the School of Engineering was new to Mr. Carrier but since Mr. Carrier had expressed a desire to widen his circle of acquaintances on the campus, it seemed appropriate to invite him, especially since Mr. Carrier’s interests had been in engineering when he was a student at Cornell.

Everyone seemed to enjoy the lunch. Conversation was animated, and I could see that our guest of honor was enjoying his old friends and enjoying the opportunity to use that keen and trigger-quick mind of his in sizing up his new acquaintances, including the Chancellor.

As we were leaving the dining room and leisurely walking down the hall to the living room, Mr. Carrier whispered to me that he would like to talk to me privately. Without even excusing ourselves we wandered into the room the students have dubbed the “game” room. And then it happened. I knew Mr. Carrier was a wealthy man. I had learned that he might some day give something to the University. Yet, I had no experience asking for money, and I had no intention of cultivating the art at this late date. Mr. Carrier asked me what the University needed. I responded that I couldn’t think of anything it didn’t

“What I am writing is what I remember and in some respects may be more accurate than a diary since it has been somewhat refined by the processes of reflection.”

— Chancellor Emeritus J.D. Williams
need at the time. He looked me straight in the eye and said of all the chancellors and presidents he had known I was the strangest. His words were hard but his expression was kindness itself. I was beginning to really know and understand the man, and I wanted to be his friend. With some embarrassment I asked him why. He appeared to be embarrassed at the question but answered that he was trying to give the University some money but that I was most awkward in facilitating the gift. He went on to suggest several possibilities that he had in mind. I encouraged him in his idea of helping with an engineering building. He asked me about the cost and I suggested that $500,000 would be enough for the building but would not landscape or equip it. I assured him that I would try to get that done if he believed he could give the building. We shook hands on the proposition and joined the other guests to go on to the stadium to see the spring Red and Blue game.

From that day on my relations with Mr. and Mrs. Carrier have been among the truly great experiences of my life. Mr. Carrier’s recent illness and his long period in the hospital have meant the loss of a wise and friendly counselor. We have enjoyed these years that seem so short in retrospect. Together we have enjoyed our achievements and consoled each other in times of stress.

In the midst of his suffering and from his hospital bed he sent for me because he wanted me to be among the first to know that he had arranged to give an additional $500,000 to the Robert M. and Lenore W. Carrier Foundation the proceeds from which are to be used to help capable young men and women of Mississippi to attend the institution that he had learned to love and respect, The University of Mississippi. I am afraid that he found me as awkward a Chancellor as he had dealt with before, but we knew each other much better, and he knew that none could be more grateful. Our prayers are that he will recover from his present illness and return to his new and beautiful home adjoining the campus where we can enjoy his companionship and can benefit from his wise counsel.

1952 Resolution for dogwood trees in perpetuity
In the year 2000 movie “Pay It Forward,” 12-year-old Trevor McKinney receives a homework assignment that asks him to find a way to change the world. Intrigued by the task, he determines that the solution has to begin at home. By transforming the lives of those closest to him and then asking the beneficiaries of his good deeds to return the favor by finding ways to help others, he postulates that eventually the whole world will be touched by kindness.

In a similar manner, many Ole Miss alumni have found ways to pay forward...
the gifts they received from others, and the resulting benefits to humanity have been exponential.

“When people ask the question of what I want to do, the answer is simple: I want to change the world for the better,” said Ryan Ozment (BSChE 14) of Jackson. “That may seem like an unrealistic goal, but all I have to do is start by improving my work environment, then my community, state and nation.”

After graduation, Ozment secured a position with the Mississippi Department of Environmental Quality, where she is a permit writer in the chemical branch. She is tasked with evaluating the emissions of industry within the state to ensure they are below a certain threshold that does not degrade air or water quality and issues permits based on that data. Ozment is using her education to help ensure that the residents of factory towns can enjoy better quality air and water.

“I’m really invested in environmental quality. It’s something I’m passionate about,” she said. “I care about the people who live in the neighborhoods...
of these small communities. I grew up in the country and played in streams and rivers and breathed that air, so I care about what everyone could be exposed to, the young and old (being) most at risk.”

Ozment, an Iuka native, was the first female recipient of the Elsie and Harper Johnson Jr. Scholarship Endowment, providing scholarships to students enrolling in the University of Mississippi School of Engineering.

Alan Barger of Greenwood is also a beneficiary of the Johnsons’ generosity.

“I wish I could have known Mr. Johnson (photo unavailable) personally,” Barger said. “He transformed my life 180 degrees.”

After a stint at Delta State University, Barger began a career path in his family’s irrigation business. But in his late 20s, he decided to pursue an engineering degree.

“Not too many people get a chance to go back to college, and that’s what his gift gave me.”

Now 33, Barger (BSCvE 13) said the skills he learned at Ole Miss not only gave him access to a huge field of opportunity, but they have also contributed to the improvement of Mississippi roadways, ultimately making life better for those who travel in the state.

“The project that was most memorable to me was a design/build project widening 10 bridges from Brookhaven to south of McComb on I-55,” Barger said. “I was responsible for several crews, logging production of the project, construction layout, stormwater management, traffic control, safety coordinating and various other tasks.”

Perhaps even more impressive is the effect Barger’s education is having within a community halfway around the world. The UM chapter of Engineers Without Borders (of which Barger was president) initiated a service project in the Togolese Republic. Children in the Hedome Village of the small West African country now have a school, thanks in large part to Barger’s skill and leadership.

“Alan contributed to the project in significant ways,” said Marni Kendricks, faculty adviser of the UM chapter of EWB-USA and assistant dean of engineering. “We have continued to make infrastructure improvements, including a deep water well, shallow water treatment, fish farms and irrigation systems to help our friends in Togo with community improvements through engineering innovation.”

Harper Johnson of Greenwood died on New Year’s Day 2012. When he dedicated his life savings to engineering education in 2007, he knew the lasting effect and potential it held for Mississippi and the Delta. Today, he would likely be pleased to know that his gift has been paid forward in ways that have enabled more women to choose to be engineers, children to have a school and drivers to have safer travels along the nation’s roadways and bridges.

Likewise, alumnus John Adler (BSEE 60) – once the beneficiary of great generosity – is beginning to see how his own generosity has been instrumental in transforming the lives of others.

Adler, who could not speak English when he fled penniless from Hungary in 1956, traveled to many countries before arriving in the United States. He first
found shelter in U.S. Army barracks at Camp Kilmer, New Jersey. From there, the World University Service, which helps immigrants locate collegiate scholarships, directed Adler to Ole Miss in 1957. He was soon selected by a group of students and faculty to receive a full four-year scholarship. Additionally, the Ole Miss community pitched in to cover Adler’s housing, food, clothing and other extracurricular expenses.

After graduating from Ole Miss, Adler was hired by IBM for $115 per week. Realizing he had executive potential, IBM sent Adler to Stanford University as a Sloan executive fellow, and he graduated in 1971.

In 1985, Adler was recruited by Larry Boucher, a former IBM colleague who had started his own company – Adaptec Inc. Adler joined the computer hardware company as president and was appointed CEO in 1986. In 1990, he was appointed chairman of the company’s board of directors and served in that capacity until his retirement.

With a gift of Adaptec stock, Adler began donating to Ole Miss in 1993 and established a scholarship endowment. This was followed by another gift of stock in 1995 for scholarships and fellowships and another in 1996 to help ensure the university’s computer science program stays on the cutting edge. His generosity to his alma mater has amounted to more than $3 million, which, besides scholarships, has provided instructional equipment, innovative educational activities, research startup for new faculty members and more.

Today, more than 300 Ole Miss engineering students are benefiting from
thousands of dollars in scholarships and fellowships provided by the Adler Scholarship Endowment.

“The Adler Scholarship was the only means by which I was able to attend the University of Mississippi,” said Matt Lambert (BSChE 01), director of refining operations for Hunt Refining Co. in Tuscaloosa, Alabama. “Without the financial assistance of the Adler Scholarship, I would most likely not have been able to become an engineer. I owe my opportunities not only in my career but also my family to this scholarship as I met my wife, Jamie, at Ole Miss. My two boys, Ray and Jack, have already begun to develop a love for Ole Miss as I did from 1997-2001.”

After graduation, Lambert worked for ExxonMobil and was given the opportunity through affiliations with the School of Engineering. Currently, he is integrally involved with the startup of a $950 million refinery expansion responsible for making the refinery in Tuscaloosa a long-term facility. Thus, Lambert and others are indirectly involved in providing gainful employment to hundreds of people who work at and around the refinery.

Another Adler scholar, John Walker (BSMe 05) has paid his education forward by helping to construct wind turbines in rural Peru – further evidence of the School of Engineering’s international influence.

“Without the additional support from Mr. Adler, my career would not be where it is today,” Walker said.

Even more far-reaching is Shanna Andrew DeLeon’s work. She shares Adler’s generosity by helping to ensure the safety of astronauts at NASA’s Johnson Space Center. She started her career working for the space shuttle program and, after five years of training, certified as an Instrumentation and Communications Officer (INCO), otherwise known as a NASA Mission Control flight controller, mostly focusing on spacecraft radio frequency systems.

“I was one of the lead INCOs for the final shuttle mission, STS-135,” said DeLeon (BSEE 06).

Additionally, from Johnson Space Center’s Mission Control, DeLeon led a team of 12 engineers in operating and, when needed, troubleshooting issues on all audio, video, instrumentation and RF systems aboard the space shuttle through a 13-day mission to the International Space Station.

Two other Adler scholars, Rachel Buttermore (BSChE 06) and Kim Padeletti (BSChE 06), are helping to build a future generation of engineers.

“Using my degree to educate high school students in chemistry and to encourage them to go on to major in science in college,” Buttermore said.

Padeletti has invested in students as well.

“In the tradition of Mr. Adler, last year I started a $2,000 scholarship fund through my high school (the Mississippi School for Mathematics and Science) for graduating seniors who are considering Ole Miss engineering.”

Padeletti works in risk management and process engineering, supporting various energy projects, including deep water, shale and liquefied natural gas. In her nine years of professional experience, Padeletti has worked in four different countries. Most recently, she was senior facilities project engineer with Occidental Petroleum Corp. in Dubai.
Padeletti believes that without the Adler Scholarship, her life would have been very different. She said she would likely be working in a purely technical or scientific field in a much more limited capacity.

“My degree has allowed me to work on major projects that directly contribute to the global improvement of society,” Padeletti said, adding, “My life has definitely been transformed by the scholarship.”

Recipients of two other scholarships – the Brevard Family Scholarship Endowment and the Neel-Schaffer Scholarship Endowment – are being exceptionally prepared to transform the lives of their fellow men and women through engineering.

Henry Brevard (BScvE 43), co-founder of B&B Concrete Co. of Tupelo, and his family have chosen to support the university financially as a gesture of gratitude.

“About 20 years ago we decided we wanted to give credit to the university that we believe has had a major degree of responsibility for our personal and professional growth,” Brevard said. “I am grateful for my engineering education at Ole Miss. Among others, former dean of engineering Dr. Lee H. Johnson was a teacher of great merit and strong influence. Our family believes that no financial donation can repay adequately the mentoring and experience received here.”

Believing in students through scholarships, giving critical support to engineering education and providing alumni leadership are defining elements of
the legacy Brevard and family members continue to build. To date, more than 500 students have pursued their dreams of higher education at Ole Miss, thanks to Brevard Family scholarships, and more will certainly follow.

“I would like to shake Mr. Henry Brevard’s hand and say, ‘Thank you for believing in me,’” said Brevard scholar Matthew Herring (BSEE 12) of Oxford.

Students such as Herring are what the family had in mind for its support. “We have always thought that our scholarship endowment was important to help the school increase the caliber of our already gifted student body and help increase enrollment to a point of more efficiency per student, considering the funding available,” Henry Brevard said. “Our second purpose has been to make engineering education possible for deserving and talented students who might otherwise not have the means necessary for that pursuit.”

Brevard has served as president of the School of Engineering alumni chapter and as chair of the University of Mississippi Foundation, School of Engineering advisory board and the Woods Order. He was inducted into the Ole Miss Alumni Hall of Fame in 1988.

“Mr. Brevard is generous with his financial donations, but he also continues to have an interest and desire to stay involved with what is taking place here on campus,” said Alex Cheng, dean of the School of Engineering. “In particular, he seems to enjoy hearing and seeing those things that affect students of today’s generation. He takes the time and effort to follow up on his gifts to ensure funds are used wisely for the benefit of the school and especially for the students. It would be difficult to put into words the far-reaching impact Henry Brevard has had and continues to have on the School of Engineering.”

Brevard’s son, David (BA 78), shares his father’s devotion to Ole Miss, frequently becoming involved in the life of his alma mater. His contributions were recognized with the overall 2009 Alumni Service Award. He has led the Ole Miss Alumni Association as national president and has worked in several major capital campaigns that successfully attracted private gifts to help secure the university’s future. He now is active on the UM Foundation board of directors.

Neel-Schaffer, an engineering firm founded by Hibbett Neel and Gorman Schaffer, established a minority scholarship program for engineering students in 1990.

To date, the company has awarded more than $52,000 in minority scholarships to college students around the Southeast.

Recent recipient Brandon Young of Memphis, Tennessee, plans to obtain a civil engineering degree, something that would be infinitely more

Students and their families, as well as new and lifelong friends, gather under the trees in front of Brevard Hall for such traditional occasions as tailgating and convocation.
difficult, if not impossible, without the generosity of Neel-Schaffer.

“With that degree, I feel that my opportunities are boundless,” Young said. “The skill sets obtained through my degree will enable me to help others in ways that I could have never done otherwise.”

Though he’s still a student, Young is poised and eager to begin using his education to transform the world.

“Giving back to the Oxford community, and to my hometown, will be easier now,” he said. “Things like volunteering my time towards a community project or traveling to other parts of the world where infrastructures, such as the ones we are accustomed to, are not available are things I can do with my degree and things that I am truly excited about.

“This scholarship has given me confidence and security in knowing that I have people at Neel-Schaffer who believe in me and give me their full support,” he said. “The scholarship has changed my outlook on life after graduation.”

Kendricks agreed that an engineering degree can be a life changer for some people.

“Students attending school in-state with scholarship assistance can enjoy the benefit of graduating with minimal debt as they begin a career,” she said. “Direct investment in a young person’s academic preparation for a significant career is a gift that cannot be measured.”
Many students have passed through the halls of the School of Engineering at the University of Mississippi to earn their degrees. On occasion, students received academic scholarships to assist with their studies in engineering. However, a select few have been able to turn their athletic ability into an engineering career with the help of an Ole Miss athletics scholarship.

Shannon (Wilson) Aufman received an athletics scholarship to attend Ole Miss and compete on the rifle team in 2004. A native of Fairfax, Virginia, Aufman knew since her freshman year of high school that she wanted to pursue engineering.

“The combination of athletics and academic scholarships I received, quite simply, allowed me to achieve my goals of earning an engineering degree and competing as an athlete on the collegiate level,” Aufman said. “Entering college, my primary goal was to earn an engineering degree. Regardless of where I went to college, I would be relying on scholarships to fund my engineering education.”

Aufman was recruited by nearly a dozen different rifle programs, but Ole Miss stood out to her, as she was only considering colleges with strong engineering programs.

“I’ll admit that the women’s rifle team is what brought Ole Miss to my attention, but the School of Engineering is what put it on my short list,” she said. “After visiting Oxford, meeting with engineering faculty members and touring the athletics and academic facilities, my decision was made. I was going to be a Rebel.”

Aufman said her coaches and trainers made sure that student-athletes stayed focused on their education.
“Academics were, on no uncertain terms, our No. 1 priority as student-athletes. As the title suggests, we were students first and athletes second. This phrase was repeated at every team and athletics department meeting,” she said. “The athletics department encouraged academic success above any athletic achievement.”

She added that though team activities conflicted with class schedules in many instances, every effort was made by coaches and staff to reschedule them around academics.

“If missing a class or laboratory session was unavoidable due to travel, we were required to prove how we would make up the missed work,” Aufman said. “The athletics department also offered free tutors for all core classes and had mandatory study hall hours. (All athletes were) assigned an athletics academic counselor to monitor their academic progress and promote their academic success. Furthermore, travel with the team was contingent upon good academic standing in all courses.”

Aufman completed her bachelor’s degree in geological engineering in 2008 and earned her master’s in environmental engineering in 2010. She is now an environmental engineer for North Carolina’s Department of Environment and Natural Resources, all thanks to her education at Ole Miss.

Norman Seawright Jr. had a similar experience. The Moss Point native turned his talent at wide receiver into an Ole Miss football scholarship to study engineering at Ole Miss. Seawright grew up in a family of eight children, so he strived to receive a scholarship to take the financial burden of a college education off his parents. In 1977, Seawright was offered a free opportunity for an Ole Miss education.

Initially, Seawright wanted to attend an out-of-state school. Eddie Khayat, a family friend from Moss Point and Chancellor Emeritus Robert Khayat’s father, had an influence on Seawright’s decision. Once he was talked into visiting, he fell in love with the campus.

“Having that athletics scholarship to play football afforded me the opportunity to get an engineering degree at Ole Miss,” Seawright said. “It was paramount to me, and I applaud Ole Miss for offering scholarships to athletes so they can receive a wonderful education.”

Seawright earned his degree in the Department of Geology and Geological Engineering in 1982. After eight-and-a-half years as a U.S. Air Force pilot, he joined United Parcel Service Airlines, where he serves as Louisville assistant chief pilot in management. He holds a Master of Business Administration and a Master of Science in Leadership and resides in Greenville, Indiana.

“Attending Ole Miss was the best decision I ever made in my life,” Seawright said. “I had a great time at Ole Miss and in the engineering (school). We had a
great conscientious faculty and coaches to make sure we got an education. The professors cared, and if you showed that you cared about your education, it made your experience better."

**Dwayne Nesmith** (BSCS 84), a teammate of Seawright’s from Wesson, said his scholarship to play linebacker for the Ole Miss football team is the reason he chose computer science as his major. During his first semester, he was able to take a programming course through FORTRAN, which then determined his major.

“Getting a scholarship was very important to my ending up in engineering,” Nesmith said. “If not for that, I would have started college at one of Mississippi’s community colleges, and there is no way to know if the serendipity of that first FORTRAN class would have been repeated there.”

After working with Andersen Consulting upon graduation from Ole Miss, Nesmith earned his MBA from Harvard Business School and went on to found several companies, including Vi-ant Corp., which went public in 1999. He is now a consultant for software companies in Boulder, Colorado.

“My Ole Miss engineering degree, along with the leadership experiences both on and off the field at Ole Miss, went a long way toward my acceptance and success in graduate school and beyond,” Nesmith said.

Scholarships are not the only connection between athletics and engineering. Robert Carrier, the namesake for engineering’s Carrier Hall, lived in what is now known as the Chancellor’s House at the edge of campus. With no ties to Ole Miss, Carrier, the namesake for engineering’s Carrier Hall, lived in what is now known as the Chancellor’s House at the edge of campus. With no ties to Ole Miss, Carrier, newly retired from the lumber industry, passed through Oxford on a business drive and fell in love with the university. Carrier would attend football practices daily and became close friends with Head Coach John Vaught. Chancellor Emeritus Robert Khayat recalled Carrier attending those practices and watching from his car in the 1950s. During that time, Carrier gave a small portion of land to Coach Vaught behind the Carrier House to build a home that still stands today.

In addition, Carrier contributed $500,000 to the development of Carrier Hall for the engineering school in 1954 and set up a scholarship endowment fund that still exists today, giving more students the opportunity to experience Oxford and Ole Miss.

Former Ole Miss baseball catcher **Scott Haltom** (BSME 10) was a recipient of the Carrier scholarship when he arrived at UM in 2006. As a result, he was able to give his athletics scholarship spot to another player. Haltom, a fifth-generation Ole Miss student from Ridgeland, always knew he wanted to pursue a career in engineering.

“Engineering was always my main goal,” Haltom said. “I loved baseball as much as anything, but I realized at an early age that my brain would outlast my throwing arm. To me, playing catcher had many similarities to solving an engineering problem. You’d have to read the situation, decide what you thought the best course of action was and execute with confidence.”

Upon graduating from Ole Miss, Haltom earned his master’s degree from the University of Texas at Austin. He recently took a job at ExxonMobil as a mechanical engineer in Baton Rouge, Louisiana.

These individuals are just a small example of the outstanding student-athletes who received scholarships to achieve their career goals. Currently, 310 student-athletes are on either full or partial athletics scholarships to help with their education at the University of Mississippi.
Engineers among the most generous donors to emerge from the University of Mississippi. Many of them contribute to the university financially, some return to campus as guest lecturers or to recruit students as future employees for their companies, and a few return to the School of Engineering as faculty members. Regarding the latter, these select few were so influenced as students by their professors that they chose to extend that influence by becoming instructors for future engineering majors attending the university.

Meet three of these professors.

Ellen Lackey (BE 90, MS 92, PhD 96) began teaching courses at UM as a graduate student. The professor of mechanical engineering started as a faculty member in 1995.

“I especially enjoy teaching the design courses and courses related to my research in polymeric composites,” Lackey said. “Design courses are fun to teach because they challenge students to draw upon all of their knowledge to solve problems. I also enjoy teaching courses related to my research in polymeric composites because they give me the opportunity to incorporate current research topics into the courses, and I can give students the opportunity to participate in work that is directly applicable to industry.”

In addition to her work at UM, Lackey has worked in summer positions at the National Mechanical Engineering Laboratory in Tsukuba, Japan, and at Kennedy Space Center in Cape Canaveral, Florida.

“What I find most fulfilling about teaching at Ole Miss is working with the students in classes and on projects and helping to give them the opportunity to develop their skills,” she said.

David Carroll (BSChE 79, MBA 79) joined the chemical engineering faculty this fall.

“I love to teach, I love Ole Miss, and I’m retiring from ExxonMobil to do just that,” he said. “As a student, I really liked expanding my ability to recognize issues, analyze the causes and identify solutions. It really helped me begin to recognize and develop problem-solving skills, which is the key requirement of all jobs.”

Looking back, Carroll said his experiences at UM strengthened the foundation laid by his family to deal with issues.

“Hopefully, my experiences will either spark a new or fan an existing flame of curiosity and hunger to learn to help my students enjoy life to the fullest,” Carroll said. “I always like being around learning environments. I’ve been fortunate to have worked in an industry and with a company that offers a rich learning environment.

“I look forward to being able to share those experiences with the next generations of problem solvers,” he said.

Elliott Hutchcraft (BSEE 96, MS 98, PhD 03) is one of the youngest faculty members in the Department of Electrical Engineering, having accepted the associate professor position in June 2003.

“I think I chose to stay here for a couple of reasons,” Hutchcraft said. “While I have a passion for teaching, I thought that the ability to do more meaningful research here would make it a more attractive position. So, the balance that the position here offered was a benefit. Plus, my uncle, Frank Moak, was the former dean of students, and so I’ve been coming to Oxford and Ole Miss for as long as I can remember.”

Hutchcraft said he enjoys the interaction and camaraderie that go along with teaching UM students.

“One of the nicer aspects of Ole Miss is that, for the most part, we can get to know the students because the class sizes haven’t gotten too big,” he said. “So, we do get to understand the trials and tribulations that the students are going through, and that creates a bond that the students as well as the faculty members will long remember.”

While Hutchcraft readily acknowledges that remaining at UM after graduation isn’t for everyone, he nonetheless offered some advice for those uncertain about future plans.

“With the current climate, it seems that, in general, there are far more candidates than positions,” he said. “I would advise students to use (their) knowledge of Ole Miss to help them prepare for their interviews and visit. I think it’s always appropriate to research the organization (with which) you are trying to get a job, but in this particular instance, the research is probably more important because of the intimate knowledge of Ole Miss that the former student would already have. I would advise them to highlight collaborations that could be developed that other applicants might not have the opportunity to know about.”
university of Mississippi engineering students have been able to enjoy such experiences as attending national conferences and helping to improve lives on another continent, thanks in large part to the Woods society. With a focus on direct support of engineering student activities, the Woods society was created in 2012, in honor of Jess Woods, a 1956 chemical engineering graduate. While a student at the University of Mississippi, Woods served as student body president, was a member of the naval ROTC program and was named a Rhodes Scholar. Funding from the Woods society enriches engineering students’ education by making it possible for them to participate in professional development activities that include but are not limited to summer research programs, leadership development programs, service learning, and regional and national conferences.

Recently, a group of students benefited from the Woods Society’s support by receiving funds to attend the 52nd annual Design Automation Conference in San Francisco, California. Kevin Lindenmayer, an engineering graduate student, was able to make the most of his experience at the conference. “In addition to being an A. Richard Newton Young Fellowship recipient, I also had an accepted paper in the Works-in-Progress section. This allowed me to present research on multiple topics and convey the breadth of work we are engaged in here at the University of Mississippi,” he said.

Alex Gunter, a junior in computer science, and George Humphrey, a senior in electrical engineering, also represented the university at the conference. According to Gunter, attending the Design Automation Conference was vital to his goals. “While there, I was able to get a much better view of how my work at Ole Miss relates to other research,” he said. “It was an opportunity to get feedback from experts and gave me several new areas to begin investigating. These types of opportunities build on my academic foundation that I will be able to use to complete my studies and pursue my career.”

Gunter is also a member of the Sally McDonnell Barksdale Honors College and the recipient of the Sally Vick Hill Scholarship, one of the university’s largest scholarship awards. Humphrey, who is also a member of the Army ROTC program, found himself able to use the conference as a networking opportunity as he considers furthering his education. “I was able to exchange business cards with recruiters, hiring managers and other professionals who are aligned with graduate programs in engineering,” he said. “I am working on research with Dr. Matthew Morrison on hardware security, so meeting panelists and lecturers who are experts in this area was very beneficial to my research and understanding of current challenges in the field.”

Funding from the Woods Society is also available to support engineering student organizations. The National Society of Black Engineers, Engineers Without Borders, Society of Women Engineers and Engineering Student Body are among the organizations that have been granted funding through the Woods Society.

Christopher Riley, a former president of the National Society of Black Engineers, expressed thanks for the Woods Society’s support and the impact it has had on students and their studies.
Society’s support of the organization he led while pursuing a degree in chemical engineering.

“One resource that proved beneficial and helped open numerous career doors for many of our members was the contributions by the Woods Society,” he said. “The funding was used to send NSBE members to the annual National Society of Black Engineers convention, where many found various internships and employment opportunities.”

According to Riley, the organization has been able to send nearly 40 students to NSBE conferences in recent years. It was also able to host several programs on campus for members and the engineering student body as a whole.

“Without question, the sponsorship and commitment exhibited by the Woods Society has helped ensure the success of developing Ole Miss engineers for many years to come,” said Riley, who is now employed with Baxalta, a global biopharmaceutical company, where he serves as an associate with its operations development program.

With members who are dedicated to using their engineering skills to serve others, the UM Engineers Without Borders chapter has been traveling to Togo, Africa, since 2012. The chapter has been able to do this, in part, with the support of the Woods Society. International travel comes with a high price tag for many of the students who want to participate, and that is where the additional assistance has been extremely important. Because of its mission of service, EWB, as it’s known on campus, is becoming one of the strongest engineering student organizations as a result of the support it has received.

Students, such as Amanda Couch, a recent geological engineering graduate, were able to travel to Togo through funding that the Woods Society provided.

“My trip to Togo, West Africa, with the Ole Miss chapter of Engineers Without Borders was an immense experience that could not have happened without the support of the Woods Society and the Dean’s Office at the University of Mississippi,” Couch said. “I was honored to be a part of something so very worthwhile and life changing.”

Couch is now attending graduate school at Boise State University, where she is earning a degree in geology with a focus on fluvial geomorphology. She will also be working on the Boise River Enhancement Network project.

Engineering faculty also understands the importance of the Woods Society’s existence. Cris Surbeck, associate professor of civil engineering, serves as adviser to EWB and has firsthand knowledge of how the Woods Society has helped the organization grow. She has worked with the organization to ensure its members have the necessary support to complete their projects abroad. She, too, is thankful for the contributions of the Woods Society.

“The Woods Society has come through for us by supplementing funds when EWB has made all the preparations and raised all possible funds for a project trip to Togo,” Surbeck said. “EBW is an organization that promotes the education of students in the context of providing a service to a needy community. So there are two sets of beneficiaries from the Woods Society: the students in the School of Engineering and the Togolese communities. In other words, a sincere AKPE KAKA (thank you very much)!”
Effective leadership is a critical skill. But are we born leaders or does some event or experience teach us to lead? It may be some of both.

Each Friday during fall semester, School of Engineering Dean Alex Cheng and I host ENGR 400, inviting engineering alumni and friends to lecture about their personal perspectives on leadership.

The text for the course, *The 21 Indispensable Qualities of a Leader* by John C. Maxwell, lays the groundwork for the weekly encounter with remarkable individuals who take time from their work and families to pass along years of experience and wisdom.

“Through this course, I learned valuable life lessons from some of the most successful people I have ever met,” said...
Andrew Johnson, a civil engineering senior from Nashville, Tennessee.

Students in the course are privileged to hear outstanding career advice and inspiration about how to become a great leader. Without continual contributions from alumni and friends of engineering, this highly effective course would not exist.

A few of the speakers in ENGR 400 have included Tamara Crawford (BSME 02) from Lockheed Martin; David Dykes (BSChE 86), program manager of Science Applications International Corp.; Mike Jurgensen (BSME 74), retired pilot from FedEx; Nathan Witt (BSCvE 05), corporate engineering manager of Ergon Inc.; Bill Parsons (BE 79), former director of Kennedy Space Center, along with his former chief of staff Joe Dowdy (BA 79); and Albert Hilliard (BSCS 83), Upstream business projects execution manager of ExxonMobil.

Students really related to Ross Bjork, UM athletics director, who shared valuable life lessons he learned from his grandfather, and to Jeff McManus, UM director of Landscape Services, who told of his extraordinary leadership journey.

When students were asked what really hit home with them, Sherman Jones, a chemical engineering senior from Laplace, Louisiana, said, “I really liked John Ward’s (BE 80, CEO of Hatteras/CABO Yachts) statement ‘It’s fun to win’ because it’s raw and honest, and I enjoyed Hunter Howell’s (BSChE 05, refinery operations supervisor, ExxonMobil) talk on how to successfully manage your boss. Each speaker in the class was amazing!”

Always a dynamic, interactive speaker, Markeeva Morgan (BSEE 01), a program manager for NASA, reminded students about the necessity of developing a deep self-awareness, learning to effectively communicate brilliant ideas and taking advantage of unexpected opportunities.

“I enjoyed the experience visiting with the class and would be honored to do it again!” Morgan said.

“Although initially I was dreading this Friday afternoon class, it has been one of the most beneficial classes I have taken throughout my entire educational career,” said Olivia Walt, a senior from Brandon who completed her Bachelor of Engineering degree with an emphasis in business administration in May 2015 and went to work as an estimator with Yates Construction. “I have been so fortunate to have access to the tools and knowledge that have given me a jump-start on how to really present and carry myself in the professional world.”

From those who have the benefit of seeing farther down the road, a shared vantage point is a treasure map for others. In the words of theologian Norman Geisler, “You can see a whole lot farther standing on the shoulders of giants.”

Hunter Howell (left photo) and Albert Hilliard (right) meet students and friends after class.
PATRON ($25,000+)
Beicip Inc.
Henry C. Brevard Jr. ▲▲
ExxonMobil Foundation
Harper Johnson Jr.

BENEFACtor ($10,000 TO $24,999)
Atef Z. Elsherbeni
Sarah N. and John O. Hastings Jr.
Louise M. Jones
Cindy L. and Michael C. Jurgensen ▲▲
Deborah and Bobby R. Pate
Phillip J. Wong

EXECutive ($5,000 TO $9,999)
John G. Adler
Ashland Inc.
Barbara K. Beckmann ▲▲
K. Dawn Blackledge
Holly M. Bounds
Martha R. and Frank S. Hill Jr.
Harriet N. and Albert L. Hilliard ▲▲
Terry P. and Kerry G. King
Neel-Schaffer Inc.
Elizabeth W. and Dale A. Touchstone

Advocate ($2,500 TO $4,999)
A. Cheli and Samuel F. Alexander ▲▲
Karen T. and Frank A. Anderson
Nancy L. and George G. Byers
GE Foundation
Denise C. and Gerald A. Gibson III
Kelly and Hunter H. Howell ▲▲
Charles M. Jenkins ▲▲
Christy G. and Scott A. Lea ▲▲
Siva Malladi ▲▲
Mississippi Power Foundation
Shyam R. Suchdeo

Associate ($1,000 TO $2,499)
Minda J. and J. R. Alexander ▲▲
Barbara D. and David W. Arnold ▲▲
Lawrence A. Ashley Jr.
Thomas S. Austin Jr. ▲▲
James W. Barnette ▲▲
Janet L. Baumann ▲▲
John W. Bolich
Celeste G. and David M. Carroll ▲▲
Daisy T. and Alexander Cheng ▲▲
Deborah A. Chessin and Seth M.
Dabney
Gloria and J. Filo Coats ▲▲
Stuart H. Coleman
Sara M. and Jeff L. Costner
Carolyn C. and Joseph B. Durrett ▲▲
Angelia and William D. Dykeman ▲▲
Sarah E. and Stephen V. Edge ▲▲
Merle and David E. Galloway ▲▲
Virginia L. and George E. Goza ▲▲
Mary Lynn and Michael Gratzer
Emily and F. H. Hohenschutz
Charles S. Jenkins ▲▲
Johnson Lumber Co.
Dorothy D. Johnson ▲▲
Richard E. Kennedy ▲▲
Paula G. and Joseph F. Lauderdale ▲▲
Tammy S. Lum ▲▲
Jean H. and Robert R. Marriam
David Martineau ▲▲
Wayne Minor ▲▲
Becki and David H. Mitchell ▲▲
Barbara and William B. Mixon Jr.
Janice M. Molloy
Parker Hannifin Foundation
Qcomm Network Services
Raytheon Co.
Sallie M. and Tom Riddell
Mary Jane and Julius M. Ridgway ▲▲
Linda B. and Stephen H. Scott ▲▲
Suzanne and Bruce Senter
Tami M. and Charles E. Smith Jr. ▲▲
M. Karen and Steven A. Smith ▲▲
Debra L. Starnes and David M.
Lindsay ▲▲
Ramanarayanan Viswanathan ▲▲
Elizabeth F. Wadlington ▲▲
Emily F. and Mike E. Williams ▲▲
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BANQUET CELEBRATES THE GLOBAL ENGINEER

The 2015 Engineering Awards Banquet celebrated outstanding students, faculty and alumni with the following awards:

**STUDENT AWARDS**
Outstanding Senior Leadership Awards: Caleb Robinson, Erin Dyer, Samuel Bowie, John Clark
Mississippi Engineering Society Award: Samuel L. Di
David Arnold Award: Evalyn Holman
Taylor Medals: Aishat Aloba, Joella Vaughnn, Corey Schaal, Haley Sims, Ethan Baker, Olivia Brown, Dudley Moore, Caleb Robinson
Graduate Achievement Awards: Mehrpourbernety Hossein (Ph.D.), Hannie Parker Capps (M.S.)
Class Marshals: Grace McMahen Rushing, John Clark, Aishat Aloba, Abdulrahman Hamid

**FACULTY/STAFF AWARDS**
Outstanding Faculty Member of the Year: Jeff Roux
Outstanding Faculty Service Award: Cris Surbeck
Outstanding Junior Faculty Research Award: Byunghyun Jang
Outstanding Senior Faculty Research Award: Waheed Uddin
Outstanding Staff Award: Diane Welch
Engineer of Service Award: Barbara Beckmann
Engineer of Distinction Award: Cindy Rich

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![Image 2](image2.jpg)
![Image 3](image3.jpg)
![Image 4](image4.jpg)
![Image 5](image5.jpg)

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