A message from the dean
Focus on the future: planning, priorities and goals

Our engineering alumni are frequently astonished at the growth that has taken place on the Auburn campus since their last visit. The kinds of comments I most often hear relate to the bricks and mortar aspects of a changing campus.

There are many more changes that are taking place but are harder to see. They are just as important. They reflect the intellectual and conceptual movement of a growing, evolving university as it faces the challenge of meeting the cultural, political and economic shifts of the state, the region, and the nation.

As many of you know, the university has been moving through a process of reallocation and consolidation in an effort to place its resources into identified growth areas. We anticipate that the College of Engineering will ultimately benefit from this activity.

As part of this process, we were notified that two of our departments — Industrial and Systems Engineering and Textile Engineering — were included in 19 programs university-wide that did not meet the minimum criteria for departmental status. However, the institution’s board of trustees, at its June 5 meeting, granted variances for both programs based on quality parameters that both departments exceeded.

Industrial and Systems Engineering was recognized as a department that has achieved recognition as a nationally ranked program which, in terms of students and faculty, numbers above average in size in relation to its peers in comparable engineering institutions.

In fact, the quality of the industrial and systems engineering curriculum has never been a secret in either the academic or professional arena. Among its outstanding graduates are Sam Ginn, CEO of Airtouch; George Hairston, who heads Southern Nuclear Operating Company; Tim Cook, executive vice president at Apple Computer; and Joe Forehand, who was recently named to lead Andersen Consulting’s worldwide network of offices as CEO.

Much of the credit in bringing Industrial and Systems Engineering the recognition it now enjoys belongs to the vision of former department head Ed Unger and the strong faculty that joined him; the recent appointment of Alice Smith to head the program has given me the assurance that it will not only continue as an innovative curriculum, but move into the forefront of its field in the years ahead.

In much the same vein, I anticipate that the Textile Engineering program will continue to provide an innovative curriculum that produces well-prepared graduates for the industry it serves.

Indeed, past graduates who have distinguished themselves in textile engineering include Gerald Andrews, former president and CEO of Johnston Industries; Tommy Johnson, president and CEO of Russell Yarns; and Dwight Carlisle, president and CEO of Russell Corporation.

As a program that serves a specific component of the engineering community, the Department of Textile Engineering has fulfilled the needs of an important segment of the state’s — and region’s — focus.
—A message from the dean

(continued from page 1)

— economy as well. The department’s size is in part a reflection of the absence of broad-based engineering service courses such as statics and thermodynamics, which are concentrated within larger core departments.

That the Department of Textile Engineering has proved extremely successful in serving its primary industrial constituency is apparent in the comprehensive, industry-funded scholarship program that it enjoys, which is second to none. Its graduates have proven themselves as leaders in a tough, competitive field that has been unfairly characterized in media reports as “going offshore.”

Nothing could be further from the truth, which reflects an overarching media focus on the apparel segment of the industry’s move to lower its labor rates. Fiber production, which represents the commercial area in which textile engineering predominates, continues to be a growth industry — and one whose focus on sophisticated automation promises to keep it in not only in the forefront of engineering innovation, but a strong employer of engineers as well.

I think it is safe to say that the future of this industry lies in the answers that engineers find to its challenges; it is our intention to play a significant role in supplying engineering graduates.

I would be remiss if I did not mention the role that Bill Walsh, who has headed textile engineering at Auburn over the past decade, has played in the growth of the program. Bill built a faculty that brought the department’s textile engineering curriculum its first report of full ABET accreditation; its participation in the National Textile Center, one of only four institutions selected nationally; and a substantial increase in research funding.

Cornell’s Peter Schwartz will take over the reins of the textile engineering program on Jan. 1, 2000, bringing Bill’s tenure to a close. On a strictly personal note, I have to admit that it will not be an easy thing to see Bill Walsh leave the College of Engineering; he has, in his uniquely quiet and low key manner served as a mentor to his students; a reassuring voice to their parents; a focused leader to his faculty; and a trusted friend to myself and many others.

In making these comments, it is clear to me — and the engineering community at Auburn — that these programs retain not only the viability necessary to meet the challenges of the future, but will in fact significantly contribute to the direction we are taking in the years ahead.

In a similar vein, I would like to mention briefly some of the changes that are taking place in our outreach programs. We will look at these in greater detail in an upcoming issue of Auburn Engineering, and as a result, I would like for you to consider the following points as a view of the direction we’re taking here, rather than a comprehensive overview.

Both of our engineering outreach offices are being reorganized and redirected to better serve the clients who use their services, and importantly, linkages with the College of Business are being joined more closely in recognition of the strong interrelationships that exist between business and engineering beyond the campus.

These units include the Engineering Extension Service, which offers CEU credit courses in a variety of formats, both on and off campus, and the Graduate Outreach Office, which primarily provides master’s level academic credit in engineering and business courses, including the MBA.

The structure and direction that we will take here will more effectively bring our resources beyond the campus, in an operating environment that is more responsive to the needs of graduates who have already entered the marketplace and want or need additional courses to move ahead in their careers.

We have already begun the process of bringing these offices under a more centralized focus, and expect to name a new director to head them into a closer, more responsive relationship with an ever widening number of professionals who are looking to upgrade their technical and business skills.

We plan to communicate our capabilities in these areas in a number of ways, and I invite you to come to us with your questions and comments. You can make them known to me or interim director George Blanks through the address on our masthead.

The closer relationship that we are forging with the College of Business is also evident in the new direction that the Thomas Walter Center for Technology Management
Freshmen encouraged to bring computer

All freshmen entering the College of Engineering this fall will be strongly encouraged to bring a personal computer with them to use in their daily educational activities, according to Vic Nelson, interim associate dean of academics.

“This is a decision that was reached following a broad-ranging and in-depth look at the tools our students will need to succeed in their engineering careers,” Nelson noted. “Engineers in the field interact daily with personal computers for communication, engineering analysis and design, problem solving, internet access, and many other activities.

“Our goal is to prepare our students to work in this environment, and to enhance the quality of their engineering education.”

Incoming students attending the university’s Camp War Eagle freshmen orientation sessions will be introduced to the requirements of the computer initiative, and provided with a set of guidelines listing suggested hardware and software purchases.

“If incoming freshmen do not own a personal computer that meets the minimum configurations required for their classes and labs, they may lease one through the university or through another source rather than purchase their own,” Nelson explains.

A software bundle on CD-ROM will be available for purchase at Engineering Media Services, located at 218 Ramsay Hall, for about $200. It will support courses taken by all students in engineering, as well as other courses specific to the various engineering majors.

Included in the bundle are a package for mathematical analysis, an engineering drawing program, and multimedia and internet programs, as well as a C compiler and related tools for developing computer programs.

The latter will be used in some introductory courses that cover computer programming fundamentals; a second CD is required for class sections that use a Fortran compiler.

“When I attended Auburn as a freshman in the sixties, all of us carried a slide rule with us as a matter of course,” noted Larry Benefield, dean of engineering.

“Students, and I include myself here as well, moved on to hand-held calculators that began as simple five-function units, but became increasingly sophisticated to the point where alpha-numeric models became the norm.

“This latest iteration in the kind of engineering tool that we use as both students and professionals has moved (continued on page 15)
Philpott-WestPoint Stevens Professorships are appointed

John D. Cressler and Yehia El Mogahzy will begin three-year appointments as Philpott-WestPoint Stevens Distinguished Professors of Engineering.

“College of Engineering faculty members who hold Philpott-WestPoint Stevens professorships serve as positive role models for their students,” said...
Raju, Bulfin appointed as AU's first professors of technology management

P.K. Raju and Robert L. Bulfin have been appointed as Auburn University’s first Engineering Professors of Technology Management, according to an announcement by Larry Benefield, dean of the college.

Bulfin, a member of the Department of Industrial and Systems Engineering, joined the faculty in 1980. Raju, a member of the faculty in the Department of Mechanical Engineering, has been at Auburn since 1984.

To be considered for appointment as an Engineering Professor of Technology Management, a candidate must be nominated by the department head and provide a statement of interest in working to develop an engineering and management option for undergraduate engineering students, according to James O. Bryant, associate dean and director of the Thomas Walter Center for Technology Management.

“Engineering decisions must reflect sound business as well as technical judgments and as a result, successful engineers must work effectively in cross-functional teams with their business counterparts,” Bryant said.

Roberts is named to Uthlaut professorship

Chemical Engineering’s Chris Roberts has been selected to the George E. and Dorothy Stafford Uthlaut Endowed Professorship, according to Bob Chambers, department head. Roberts will hold the appointment for three years.

The Uthlaut professorship in chemical engineering was established by George and Dorothy Uthlaut of Houston, Texas, to recognize faculty who provide a strong commitment to student instruction and a dedication to quality research, Chambers said.

“Dr. Roberts has already established himself as one of our top instructors, having received the Birdsong Superior Teaching Award in 1997,” Chambers noted. “Two students conducting undergraduate research under his direction placed first and second at Southeast Regional AIChE Student Conferences — Joanna Cason in 1998 and Melanie Leenhouts in 1995.”

His research efforts brought Roberts the 1997 Auburn Alumni Engineering Council Junior Faculty Research Award, and the Young Faculty Career Enhancement Award from the NSF.

“We — the faculty, staff, and students of the college — deeply appreciate George and Dorothy’s vision and

—Cressler, El-Mogahzy

Larry Benefield, dean of engineering, in making the announcement. Cressler is a member of the electrical and computer engineering faculty, and associate director of the Alabama Microelectronics Science and Technology Center (AMSTC).

He also serves as director of the cryogenic electronics laboratory within the AMSTC, a multi-disciplinary research facility based in the Department of Electrical and Computer Engineering. In 1992, he left IBM’s Watson Research Center in New York to join the Auburn faculty.

Cressler is known for his habit of handing out quotations to students at the end of his lectures to help remind them that life is more than diagrams and equations, and that success depends on character, integrity and hard work as much as knowledge.

Cressler was awarded the 1996 Eta Kappa Nu C. Holmes MacDonald National Outstanding Teaching Award, which represents the highest honor that the electrical engineering honor society presents.

He also received the 1998 Birdsong Merit Teaching Award and the 1999 Alumni Undergraduate Teaching Excellence Award.

Textile’s El Mogahzy joined the department in 1986 after receiving his doctorate in fiber and polymer science at North Carolina State University.

El Mogahzy is recognized for his unique ability to integrate his knowledge of and work with industry with his academic duties, Benefield points out.

El Mogahzy has excelled in both research and extension, with 41 refereed journal articles as well as three books in progress — Fiber-To-Yarn Engineering will be published this summer, and two others will be published soon after. He has been principal or co-principal investigator on more than $2 million in research funding.
fundamental design components — thinner walls, lighter weight and higher strength,” Overfelt points out. “The result of these state of the art castings is a higher value-added product.”

Overfelt is ready to move into even more sophisticated foundry engineering technologies, and heads a College of Engineering-based facility, the NASA Solidification Design Center, to move the necessary research ahead.

“Our NASA funding this year totals approximately $2.9 million, with a significant off-campus component that includes academic institutions such as the University of Alabama and MIT, as well as a number of industrial partners.”

Proposals for the center’s research base are solicited countrywide, subjected to peer review and prioritized, Overfelt notes. The program, which began in the fall of 1996, is now in its fourth year.

“Our partnership with NASA includes a number of specific projects geared toward the space station, including the design of an electromagnetic levitator.”

Overfelt’s group is also responsible for experiments designed to melt small samples of pure metals and commercial alloys, which are then analyzed for thermal diffusivity, surface tension, and other properties.

“Importantly, this represents the basic raw data needed to create computer simulations of foundry activities, which will ultimately lead to computer models for manufacturing processes,” Overfelt observes.

Current computer models have generally acted as poor approximations of the casting process because they are based on analyses of the earth-bound properties that are exhibited when molten metals solidify, Overfelt explains.

“Gravity messes things up.” would be Overfelt’s less-than-technical take on the problem, adding, “What’s important to us is the microstructure of the metal as it freezes into a solid—that determines its mechanical properties, and hence, performance.”

Casting samples in the microgravity of low earth orbit produce data that model the process with a much higher degree of precision, and allow the demonstration of more options in the process itself — designing for minimal scrap and environmental loads, for example.

“Our overall goal can be summed up in three ways: shortened lead times, lower costs and improved quality.”

He points out that the development time for complex parts in a manufacturing process can often be spread over two to three years, which can represents significant costs.

“Time to market is a significant hallmark of today’s manufacturing culture,” he explains. “With manufacturers turning out products more quickly, it’s necessary for foundries as suppliers to do the same.”

Lead time, Overfelt points out, compounds like interest — the further behind you are, the further behind you get; the further ahead . . .

“Our intention is to get to that place where we can design a product on a computer screen with complete confidence, to the point of replicating the manufacturing process digitally before we make the first part,” he points out. “The result will be a time line measured in days rather than weeks or months.”

He adds that in the past, foundry operations were characterized by cut and try and trial and error methods, which are no longer options to today’s foundry operators.

“That was okay in the ’70s, but not now; we don’t have the luxury or time to try three or four ways to cast a product,” Overfelt says. “More to the point would be the danger of locking into a suboptimum process that throws costs out of line, skins profits down and makes the foundry uncompetitive.”

In fact, Overfelt says, he looks to rapid prototyping to expand markets for foundries.

“Citation Corporation, which has a large presence in Alabama, is one of our prime industrial partners with a lost-foam plant in Columbiana and an aluminum foundry in Bay Minette,” Overfelt points out. “Even closer to home we have Vermont American involved.”

Overfelt views the part that students play in the center as primary to his research efforts as well.

“We have seniors that designed a furnace that is now being used in Michigan,” he points out, adding that another

(continued from page 4)
CSE graduate Spencer looks to return opportunity

Mark Spencer, a March graduate in computer engineering, entered Auburn with National Merit and Auburn Presidential Scholarships, and then was selected as the recipient of the prestigious Albert and Julia Smith Scholarship.

For the home-grown Auburn native — the son of two AU faculty members — the combination of scholarship support represented a ‘full ride’ to his undergraduate degree. Now he’s graduated, but the scholarship support still continues.

The other way around.
At a time when most students are thinking only of their first job, beginning a career and starting a family, Mark is funding a four-year, $2,500 scholarship to be called the Spencer Innovation Scholarship. The first recipient will be named in the fall, 2001, term.

“I’ve had unusual opportunities in life,” the self-effacing computer buff quietly points out. “This is something that I thought about and discussed with my curriculum advisor, Judy Aull, while I was still a senior.”

What better way, he thought, to give something back than to offer another student some of the opportunities he enjoyed.

“I don’t think of this scholarship as just about grades, but also as recognition for someone who thinks of innovative ways to approach problems in computing . . . how that kind of person looks at things in a new way,” he points out. “That’s why I wanted the word ‘innovation’ in the name of the scholarship.”

It’s been a byword for Spencer from the beginning.

Like virtually every other student in his school, he began working with computers in the fifth grade. Unlike most of his classmates, he began programming them in the seventh, with his first effort a program that his teacher could use to make up tests and keep track of grades.

By the time he got to Auburn High, he had developed a program so his classmates could do computer searches for — what else — dates!

“It worked out pretty well, except for the guy who got matched to his sister,” he says with a laugh. “But then there are always the unknowns in computer programs.”

When he came to Auburn, he was already sure that computers would be in what has sometimes been presented as a caricature of today’s high-tech grads, Spencer invited Adtran to invest in his own company, Linux Support Services, Inc.

Linux, a Unix-derived computer language that has an open architecture available to anyone, has no licensing costs, is praised for its stable platform, and has a web presence through a number of sites that allow users to compare notes on development and debugging.

“Because the source code is freely available, you can make your own changes and take your own direction in using it,” Spencer notes. “It doesn’t have much of a desktop presence now, so it’s not that well known when you compare it to Windows.”

Web servers, database and mail servers make frequent use of Linux, and it has been attractive to small and medium sized high tech companies due to its availability, stability and flexibility.

When users do experience problems, they turn to entrepreneurs like Spencer, who uses the internet to contract with a far-flung cadre of problem solvers, rather than maintaining a large staff. Most problems can be handled over the phone or through the internet rather than on-site visits, he points out.

Now based in Auburn on Stage Road, Spencer will soon make the move to Huntsville to be closer to his client base of high-tech customers, offering them a wide variety of development tools and support services for Linux.

“Sometimes we have to go face-to-face,” he says, adding with a smile that his mother, Samia, who teaches in the Department of Foreign Languages, is one of his clients who prefers on-site visits. His father, William, teaches in the Department of Educational Foundations Leadership and Technology.

Mark’s work day is usually 12 hours, not unusual for a start-up company in the computer field, he points out.

He was recruited by four or five companies before graduating, and in the twist that defines his professional life now, had offers from two others to buy his

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Inside story

With the first phase of the Wilmore Laboratories renovation nearing completion, workers are now putting the finishing touches on the facility’s remodeled interior. Clockwise from the right: the newly configured main hallway; a chemical engineering lab; workers installing fixtures; the downstairs foyer; and HVAC ducting in one of the two new penthouses, which house the building’s mechanical systems. The second and final phase of the laboratory’s renovation will bring the 50-year-old facility into completion.
Outside lab

Work on the National Center for Asphalt Technology’s 1.7 mile test track is also nearing completion, with dedication ceremonies for the facility – in essence, a huge, outdoor laboratory sited on 300 acres in Opelika – set for Oct. 23. Clockwise from right: an aerial view of the 2,600-foot straights; track manager Buzz Powell gridding placement of the 200-foot asphalt test sections; aggregates waiting to be mixed; test samples ready for analysis; Ray Brown, right, NCAT director, and contracting superintendent Gerald Koland at NCAT’s new office building located in Auburn’s technology park; a track radius being videotaped for a television news story.
With personality traits often described as balanced, objective and analytical, engineers are not generally perceived as risk takers. And, of course, in a sense they’re not, having been taught to think their way through problems completely and carefully.

On the other hand, George Hairston, like other pioneering engineers, risked entering two nascent technologies — the first, the emerging field of computing, and the second, a career in the relatively new field of nuclear power generation.

The only thing he didn’t take a chance on was Auburn. His mother was a Glom beauty, and his father a 1938 graduate in chemistry who went on to a career with American Cast Iron Pipe Co.

“I never had a doubt about where I wanted to go to school,” the 1967 industrial engineering graduate comments. “I had Auburn in my blood for as long as I can remember.”

It’s a tradition the Hairstons have carried forward with two of their three sons — Mike, the oldest, is an ME and MBA graduate now with Greenway Medical, and Casey, also an IE graduate, is in his third year at Cumberland Law. The youngest, Will, is finishing high school.

Hairston, who went through the pre-engineering curriculum in the mid sixties, points out that he originally chose mechanical engineering as his curriculum.

“I stayed in ME for a good while, but at that time the department didn’t offer any computer courses beyond Fortran,” he explains. “IE was leading the way in this area, and had courses that stressed computer applications, which allowed me to take linear programming.”

The department also offered courses (continued on next page)
—Hairston

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in plant layout and design, which was a career direction to which Hairston intuitively felt drawn.

“T’ll was two classes that had special projects involving a computer component, and I began to see where they were beginning to take us,” Hairston notes. “I felt like I needed to be grounded in them, and it was IE that gave me the exposure that was needed.

“It was completely different then,” he adds with a laugh. “We were using mainframes and punch cards . . . we can buy handheld calculators now that have more power than those mainframes ever did.

“The graduates that I meet now grew up with computers, and see them as nothing more than tools to get from point A to point B faster, which is good. That’s how business works.”

Hairston continued his education at Georgia Tech, earning a master’s in nuclear engineering following a tour of duty in the military including one year in Vietnam. He was commissioned as an officer in the Army through the Auburn ROTC program.

He considers the combination of the two degrees as one that could not have worked better for his career plans. The former gave him a grounding in production, planning, inventory and quality control, and the latter an understanding of nuclear theory. He would later augment them with the senior executive course at MIT’s Sloan School of Business.

In 1967 Hairston joined the Southern Company, becoming plant manager at Dothan’s Farley generating facility in 1978, following his licensure as a senior reactor operator. His subsequent moves up the corporate ladder have since placed him in charge of all Southern Nuclear Operating Company’s generating plants as president and CEO.

His own success in the industry has challenged him to bring new and promising graduates into the field. His innate recruiting techniques go well beyond across-the-table interviews and plant trips. He’s a familiar face on the Auburn campus.

“We cast a broad net in our recruiting activities,” he points out. “We hire from a wide background of engineers, including nuclear, electrical, chemical, civil, mechanical, industrial and other disciplines as well.

“What I basically look for is a graduate focused towards operation and maintenance — for power plant engineers — but I look beyond Southern Nuclear as well, for the best fit. This may mean guiding a graduate toward design or power marketing at another Southern Company subsidiary.”

He notes that they have a process in place—Road Map for New Engineers—to quickly integrate new employees into the company.

“We spend a good deal of time on this,” he explains. “we want to integrate new employees into the company so they can make a meaningful contribution early in their careers.”

He points in particular to the company’s co-op and summer intern programs, which bring students to the job site.

“This benefits both the students and us, because we not only get to look at these students as potential new employees, but they get to look at us, to see if they are comfortable with us and what we do.”

Hairston accompanies company recruiters on trips, particularly to the Auburn and Alabama campuses, and brings new hires with him as well.

“We feel this is important, to bring our new employees into the recruiting process,” he says. “That’s because officers like myself, who’ve been in the business for some time, are going to retire at some point . . . the new hires are looking at 20 to 30 years in the business, and have a vested interest with whom they’ll be working.”

In addition, Hairston sponsors school functions where students can be comfortable in a social setting, such as tailgate parties and basketball outings. He also maintains a close relationship with the faculty, which has led to in-plant design projects and case studies coordinated through on-campus classes.

He has also built close ties with Auburn’s Minority Engineering Program, headed by Dennis Weatherby.

“Southern has a stated goal to increase diversity in its work force,” Hairston explains. “We’re attracted to Dennis’ program because it has made a quantifiable leap in the quality of the graduate, and allows us to be involved in a program that really makes a difference.”

He adds that the nuclear power generating field represents a good choice for engineering graduates.

“Licensure of the nuclear power industry was implemented primarily for safety reasons, but has also resulted in what is probably an unintended benefit — we know we’ll be generating power in our units for the next 20, 30 and 40 years — we’ll be here as employers.”

Hairston points out that he plans to continue his recruiting activities to bring new talent to his offices and plants. He observes that he has looked to Auburn over a long period of time to provide qualified engineers, and sees the process as a continual one.

“We have been fortunate in having good engineering schools in the Southeast from which to recruit engineers, and Auburn is in that group,” he notes. “It’s a relationship that we plan to continue . . . in a sense, we measure our own success by our ability to recruit the very best engineers available.”
Hank and Brenda Hayes establish fund for excellence, diversity in AU Engineering

William F. (Hank) and Brenda W. Hayes have established the William F. and Brenda W. Hayes Endowment for Diversity in the College of Engineering to provide a fund for excellence and diversity within Auburn Engineering.

Hayes is a 1965 EE graduate, and also received the master’s degree in electrical engineering in 1967. He began his career with Texas Instruments, Inc. (TI), with most of his experience taking place in the company’s defense business.

His first assignments involved antenna research and design, but by the early ’80s, Hayes had assumed a number of management responsibilities, and in 1991 became president of the Defense Systems and Electronics Group (DSEG), which was responsible for TI’s defense business in missiles, electronics and advanced components.

In 1992, DSEG was the first defense team to be awarded the Malcolm Baldrige National Quality Award. The following year, Hayes became corporate executive vice president for Texas Instruments, where he was responsible for the company’s software business and its digital imaging venture project.

Hayes is an active participant in a number of civic and educational associations including service on the international board of directors for the Juvenile Diabetes Foundation, the Alumni Engineering Council and the Auburn University Research Advisory Council.

Brenda Waldrop Hayes has strong ties to Auburn as well. She worked as a secretary in the Department of History and the Office of Agriculture Extension from 1963-67 to help Hayes obtain his degree in electrical engineering.

Brenda then went to college herself, while raising three children — receiving a bachelor of arts degree in English from the University of Texas at Dallas in 1980, and her bachelor’s in social work from Texas Woman’s University in 1991. Hank and Brenda have now seen the addition of six grandchildren to the family.

The income from the William F. and Brenda W. Hayes Endowment for Diversity will be used by the director of the College of Engineering’s Minority Engineering Program (MEP) for program development and enhancement in order to improve student retention.

For example, the fund may be used to recruit minority students to Auburn Engineering through the MEP program; for one-on-one mentoring, counseling and tutoring; collaborative learning groups and academic excellence workshops; and for scholarships for participating MEP students.

The fund may also be used for the development and implementation of course work designed specifically to promote and improve student retention.

Scholarship support will be awarded for two academic years, or until the recipient receives the engineering undergraduate degree, whichever occurs first. Students must remain enrolled in the College of Engineering’s MEP program under terms of the scholarship, and make satisfactory academic progress on a term-to-term basis in the academic year.

“The Hayes endowment will be instrumental in helping the MEP maintain quality academic support programs and scholarship opportunities as the level of student participation grows, program director Dennis Weatherby pointed out.

“Brenda and I are pleased to be involved with the Minority Engineering Program and its efforts to create an environment that nurtures and educates talented minority students,” Hayes said.

— MEP goals (continued from page 10)

moved from pre-engineering into the engineering curriculum. That compares with 55 percent of all pre-engineering students who successfully do so and illustrates the MEP’s success is surpassing its goal.

Such success, Weatherby says, should help Auburn see an even greater increase in minority enrollment in engineering.

“We feel like the key to attracting minorities to Auburn is by building an attractive retention program,” Weatherby said. “If we build it they will come, as they say. When students come and do well academically and go out and talk about their success at Auburn, that is the best student recruiting tool you can have.”
R. Conner Warren, a 1967 graduate in aviation management, has established the R. Conner Warren Endowment for Scholarships in the College of Engineering and in Aviation Management. The scholarships will benefit both College of Engineering and aviation management students in the approximate amount of in-state tuition and fees.

To be eligible for consideration, students must have demonstrated academic excellence and be U.S. citizens. Preference will be given to students who are residents of Alabama.

Students must remain enrolled in the College of Engineering and maintain a 3.0 GPA to retain the scholarship.

Candidates for the aviation management scholarship must satisfy the same criteria.

Warren, who was raised in Evergreen, Ala., worked as a flight instructor and as a graduate assistant in aviation management at Auburn.

After graduation, he attended U.S. Air Force pilot training and flew the RF-4C Phantom for the Alabama Air National Guard.

Warren has accumulated almost 6,000 hours of flying time in a number of aircraft.

Although he never flew professionally, he points to the training, skills and experience achieved through his aviation background as equipping him for the business world and providing him with many opportunities.

He began working with Birmingham-headquartered Citation Corporation in 1975, rising to the position of executive vice president.

“I believe strongly in education as the path to personal advancement and productivity,” Warren observes.

“It is my hope that these scholarships will assist students in climbing the ladder of opportunity and becoming valuable members of society.”

In his remarks on the establishment of the scholarships, Larry Benefield, dean of engineering, noted that “Conner has been a strong advocate for the College of Engineering.

“The FEF (Foundry Educational Foundation) is delighted to establish this scholarship for Auburn engineering students who have an interest in the metal casting industry,” said Bill Sorensen, who serves as the foundation’s executive director.

The FEF was established in 1947 to “strengthen the metal casting industry by supporting unique partnerships among students, educators and industry, helping today’s students become tomorrow’s leaders,” according to the foundation’s mission statement.

The educational foundation has worked to prepare students for participation in metal casting and related industries through scholarships as well as educational programs and research in the metal casting field.

Application for the Foundry Educational Foundation/R. Conner Warren Annual Scholarship Fund in the College of Engineering must be made through the FEF website, www.fefoffice.org/warrenschol.html.
—Benefield

(continued from page 2)

ent is taking. Students who wish to augment the strong engineering fundamentals that we offer through our curricula will soon be able to pursue a minor in engineering management through the coordinating efforts of the center.

The recent announcement of Robert Bulfin of the industrial and systems engineering faculty and P.K. Raju of mechanical engineering as our first named professors of technology management are indicative of our commitment to place the necessary resources into this program to make it work. I view these appointments as a reflection of an exciting new era for both engineering and business at Auburn.

I would also like to point to the naming of five additional faculty professorships here as well, since they represent our broad-based commitment to hiring and retaining faculty with demonstrated excellence in their field.

These appointments represent named professorships, with salary supplements provided from interest earned from the endowment corpus. They include John Cressler and Yehia El Mogahzy, who join Roy Broughton and Bruce Tatarchuk as Philpott-WestPoint Stevens Professors. Cressler is a member of the electrical and computer engineering faculty; El Mogahzy and Broughton, textile; and Tatarchuk, chemical.

Chris Roberts has been named as the first Uthlaut Professor in chemical Engineering, and Y.Y. Lee, also in chemical, has been appointed as Sanders Professor.

Our ability to provide these professorships is important; faculty retention has emerged as a major issue in the face of steadily shrinking state appropriations, and only the generosity of private donors has made these appointments possible.

Our plan for the future is to move the College of Engineering to the next level of excellence, and a large component of such a goal involves building on the reputation of a distinguished faculty; we also need a quality network of staff members to back them — and facilities that are state of the art.

Auburn Engineering was recently ranked thirty-fourth among public engineering programs in the country by U.S. News and World Report; our goal over the next five to eight years is to break into the top 20 in undergraduate programs, and the top 25 at the graduate level.

As I just mentioned, facilities are a part of this equation — buildings, classrooms, laboratories, offices and equipment are part of the matrix. To this end, Auburn’s board of trustees has approved a facilities master plan for the College of Engineering that outlines a $120 million building effort over the next 13 years.

This plan represents the largest building program in the history of the university, and will draw funding from a variety of areas, with sources including the university, the state, federal agencies and donor contributions.

Driving our goal, in the early stages, will be a commitment to our university-chartered peaks of excellence, which include transportation, food safety and information technology.

Enhanced funding from these initiatives will result in the creation of approximately 20 new faculty positions over the next five years; its impact over the next 15 can only be imagined.

At the same time, we are expanding our efforts to attract quality students. The establishment of scholarship endowments will play a major part in planning in terms of our efforts in the university’s next major development campaign, which is expected to begin in the fall of 2001.

This represents one of our greatest challenges, given the stiff competition of our peer institutions, and one in which we quite frankly are unable to compete now. Many of the institutions with which we vie for students are able to offer scholarship support far in excess of our own abilities. Our plan, quite simply, is to change that.

Our students have, over the long span of Auburn Engineering, accomplished a great deal, and have excelled in their chosen professions. This is a fact brought home to me every day I meet one of our alumni — every day that I meet one of you.

I am proud to be an Auburn alumnus myself; I graduated in civil engineering in 1966. When I left Auburn, I returned to school — following a tour in Viet Nam — graduating again in civil with a doctorate from Virginia Tech. I then taught in Colorado and Mississippi.

Auburn was never far from my heart, however, and I was fortunate to be offered a position in the Department of Civil Engineering here in 1979; I served as interim associate dean of research, returned to teaching, and then accepted the position of associate dean of academics. Serving as dean of engineering was not something that I thought about.

When I was asked 18 months ago to serve as interim dean, the thought — I admit — was finally there, but it was not something I could dwell on and do the job required by the position. Now that the appointment has become a reality — through the support of our alumni, particularly the guiding hand of the Alumni Engineering Council, the faculty, and the university administration — I feel that I am ready for the job.

I am grateful to be where I am. I believe I know where the Auburn University College of Engineering needs to go.

I will need your help; I am willing to listen. I know that the College of Engineering means a lot of things to a lot of people; but I am unwavering in my belief that we are here principally for one reason: to involve our students in the best education possible, in an environment that is challenging, fun, and brings their human and professional potential to the forefront — to that place where I hope you are now.

There’s a challenge in our destination . . . a challenge in the journey itself. Through all of the changes that have taken place in Auburn Engineering over the years, I feel that a constancy of purpose has always guided us — the ability to look ahead to the future, realize the promise it holds, and act on it. I invite you to join us in meeting it.
—Tarrant

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For example, these funds have been used for computer and equipment upgrades to give students access to the highest quality equipment available to properly prepare them for today’s work force.

A percentage of this funding has also been designated for the renovation of Wilmore Laboratories, Auburn Engineering’s primary teaching and research laboratory. Now being transformed into a state of the art facility, renovations are scheduled for completion around the end of the year.

Auburn engineering students have used these donations to orchestrate E-Day, which annually brings more than 2,000 high school students to the Auburn campus, and introduces them to both the curriculum and to career opportunities in the field of engineering — as well as a look at the Auburn campus itself.

Gifts have also been used for the operation of the Cupola Engineering Society, a student group that actively recruits high school students to the College and interacts with alumni at college tours, receptions and events.

The MiniBaja teams supported by the college have used some of these funds for competitions throughout the country; last year, Auburn’s team placed fifth in the competition’s eastern division, and eighth in the midwest.

Gifts have also been used for faculty support, to attract and retain gifted professors in Auburn’s College of Engineering. Additionally, the unrestricted fund has been designated to help in the operation of programs such as the Society of Women Engineers and the Minority Engineering Program.

Without the support of our alumni and friends, many of these programs and projects could not have been made possible. Your gifts make a significant difference to the success of the college, allowing us to continue building quality education and research programs.

We appreciate your loyalty to and support of the College of Engineering. If you are interested in becoming a Dean’s Club member, or would like to learn more about it, please contact the College of Engineering Development Office at 334.844.2736, or e-mail me at tarrant@alumni.auburn.edu.

Again, let me thank you for the welcome I received in the Auburn Engineering family. I look forward to working with each of you to ensure that the College of Engineering continues in its tradition of excellence — and embraces the new goals and challenges that we are facing today and tomorrow.

—Mark Spencer

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He sees the task at hand now to refine and engineer the solutions that he has developed in his work with Linux, to grow the company, and find the kinds of talented people he needs to make it work.

He knows where the industry is going, however — to ever faster and easier exchange of information. His plan is, in some way, to be a part of it.

We’ll have to check back in two years to see just where that is.

You can reach Mark Spencer through his company’s internet site at www.linux-support.net; his personal web page can be accessed at www.marko.net.

—Materials engineering research

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The group of students designed a centrifuge to analyze high g-levels on castings.

“IT’s the opposite of our space station work — here we’re actually reintroducing a gravity vector.”

The number of students that materials engineering has graduated into the profession continues to grow, and the program has a strong nucleus of graduate students as well.

“Our strength in the instructional area as the key to our whole program,” Overfelt notes. “We’re training the next generation of space technology users, as well as guiding our students into a basic aptitude for manufacturing processes.

“And we’re having fun doing it.”

—Technology management professors

(continued from page 5)

“The goal of Auburn’s engineering and management program is to provide undergraduate business and engineering majors an opportunity to work together to develop the technical, communication, and management skills they need to succeed in today’s global economy. These appointments will move us toward that goal.”

—Uthlaut endowed professorship

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support of Auburn Engineering,” Larry D. Benefield, dean of engineering, said.

Uthlaut, a 1954 chemical engineering graduate, has a long history of involvement with AU, and currently serves on the Alumni Engineering Council.

Following a long and successful career with Exxon, he retired in 1986. In 1987, Uthlaut came out of retirement to work with Enron Oil and Gas Company as senior vice president of operations.
Engineering alumni's warm welcome is appreciated

I would like to thank all of you who have given me such a warm welcome since I began working for the College of Engineering’s Development Office over the past year. The engineering graduates with whom I have had the opportunity to meet are wonderfully accomplished; yet, these Auburn alumni still have a genuine humility and a strong devotion to their roots.

I look forward to meeting more of you in the future as we work together to advance the College of Engineering. As development coordinator for the College of Engineering, one of the programs I coordinate is the Engineering Dean’s Club.

The membership of this group is composed of individuals who generously contribute at least $1,000 each year to help support the College of Engineering. Every member of the Dean’s Club receives a plaque from the college in appreciation for their contributions.

The gifts these members make may be designated to a specific scholarship or department, or earmarked for the College of Engineering’s unrestricted fund. Of the 228 current Engineering Dean’s Club members, 118 of them have designated gifts to this unrestricted fund, which allows them to be used for the college’s most pressing needs and greatest priorities, from facility and equipment needs to student programs.

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