Does a BME Degree Really Prepare You for Medical School?—Duke’s Kemi Oni Says Yes

by Deborah Hill

After surviving a six-week med school boot camp, Pratt biomedical engineering student Kemi Oni says she’s more than ready for medical school.

Oni and 107 other minority students from around the U.S. gathered in New York City this past summer for the Minority Medical Education Program, sponsored by Columbia University. The MMEP is an intensive six-week course designed to emulate the first year medical experience. In addition to lectures, students get to observe doctors practicing medicine in a variety of venues—from office to emergency center to operating room.

At the Harlem Hospital emergency room, Kemi Oni

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A Message From the President...

Dear Duke Parent,

If you were with us for Parents Weekend, you know that the fall has been a busy time for your son or daughter. Undergraduate engagement with issues on and off campus remains high this year, with lively and thoughtful discussions of campus diversity, academic and personal integrity, athletics, world politics, and more.

In residential life, the quad system is helping foster a sense of camaraderie, creating new leadership roles, and offering new ways to get together and have fun. Other identities are forming around extracurricular opportunities, community service, travel, internships, religious life and clubs of every conceivable kind.

Balance is a key topic of September’s report of the Women’s Initiative steering committee, a campus-wide effort that touches everybody from the newest undergraduate to the most seasoned full professor. Many of the committee’s recommendations point to the need for both men and women to lay the groundwork during their college years for balancing their lives later without sacrificing either careers or family.

Meanwhile, the conversation continues around campus on how gender affects people’s experience, through challenges such as “effortless perfection”—on what we do well at Duke and how we can do better.

In the Pratt School of Engineering, a huge building called the Center for Interdisciplinary Engineering, Medicine and Applied Sciences will soon anchor a new Engineering Quadrangle, as the School makes ambitious plans for expansion. And don’t miss the article in this issue about Trinity College’s Curriculum 2000 retrospective review: early consensus holds that, while it may need tweaking to accommodate such issues as double majors and study abroad, its emphasis on balancing breadth and depth has generally been effective and well-received. The first-year writing program is getting especially high marks.

If your student will be graduating soon, I hope he or she is giving Duke high marks as well. Thank you for the privilege of working with him or her: nothing is more inspiring to academics than seeing young scholars thrill to intellectual discovery. Whatever path your student pursues after Duke, remember that you and yours will always remain part of our extended family.

Yours sincerely,

Nannerl O. Keohane

DATES TO REMEMBER

December 4, 2003
Undergraduate classes end

December 5, 2003
Undergraduate reading period begins

December 8, 2003
Final examinations begin

December 13, 2003
Final examinations end

December 14, 2003
Residence halls close for semester break at noon

January 5, 2004
Residence halls re-open for spring semester at 8:30 a.m.

January 7, 2004
Spring semester classes begin at 8:00 a.m.
center, Oni witnessed an emergency hysterectomy, gall bladder surgery, and saw doctors treat a gunshot wound.

She also talked at length with first-year medical students to get the real scoop about workload and advice on study habits. One-on-one career counseling and strategies for preparing for the MCAT medical school entrance exam round out the MMEP course.

“At first, I wondered how well my biomedical engineering training had prepared me for medical school, but now I’m sold,” said Oni. “The engineering orientation to problem solving is the key to success in medical school courses. Lecturers present pieces of information and then you have to make the connections to create the big picture. I’m used to that already from my BME classes.”

Students from undergraduate disciplines where learning is more rote memorization really struggled, said Oni, who finished the 64-hour MMEP course and exams at the top of the class.

“I realize now how valuable my training at Pratt has been,” she said. Oni already has three semesters of hands-on research under her belt from working in William Reichert’s lab. Reichert is a Pratt professor of biomedical engineering with research interests in biosensors, protein mediated cell adhesion and wound healing.

The MMEP boot camp days were long and Oni calls the amount of required reading “absolutely insane,” but there were many moments of humor and self-discovery.

On one afternoon, Oni watched a laproscopic surgery. Laproscopy is a diagnostic and surgical method in which a laparoscope is inserted through an incision in the navel. The laparoscope, tipped with a small telescope-like instrument with a light, lets doctors see inside their patient and perform surgery. Afterwards, the doctor gave each student a chance to handle the laparoscope as he explained how he trains surgical residents.

“I discovered that I’m not a laproscopic person,” Oni said, laughing and miming awkward arm and hand movements. “I have no hand-eye coordination at all.”

Oni also got the chance to don the symbolic mantle of a doctor’s authority and responsibility during a white coat ceremony.

“It was amazing how differently people in the hospital treated us when we had the white coats on,” Oni said. “People really see you, look up to you. They will gently tug at your sleeve to ask for directions or start to explain their symptoms. They trust and expect that you will help them.”

Humbling, exciting, overwhelming, and motivating, “it was an amazing experience,” Oni said.

Oni said the MMEP course has helped her to better understand healthcare issues from a world context, and she is passionate about trying to change healthcare disparities.

“I know now that I want to be involved in shaping healthcare policy, both domestic and international,” she said. Oni plans to pursue HIV/AIDS research, and is interested in working for the World Health Organization in the future.

Kemi Oni is a senior in biomedical engineering at Duke University. She is an active member of Delta Sigma Theta sorority and serves as a role model and mentor to first and second grade girls in Durham, N.C. Her hometown is Atlanta, Georgia.
Curriculum 2000 Under Review
by Jerry Oster

For the first time since 2000, all Trinity undergraduates are studying under a single curriculum — the innovative set of courses designed to help them understand the language and methods of science, grasp how different cultures and languages shape our values, master the skills of critical thinking and analysis, and write and communicate clearly and effectively.

The new curriculum, which replaced a curriculum put into effect in 1988, is currently undergoing evaluation by a committee of faculty and administrators. “We have been running a whole series of variables to look at the ways in which different courses are or are not academically stimulating and intellectually rewarding,” said William H. Chafe, dean of the faculty of Arts & Sciences and vice provost for undergraduate education. Trinity College Dean Robert Thompson Jr. said: “The review committee will report its findings in late fall, at which time we’ll have a complete picture of the course choices of the first class under Curriculum 2000,” as the new curriculum was known at the time of its implementation. Administrators are pleased with the rate at which students are completing their requirements. “There has been a reassuring amount of data that suggests this curriculum is pragmatic as well as intellectually substantive,” Chafe said. He added that the review committee is exploring ways to “add new degrees of flexibility” to the curriculum.

Administrators are particularly pleased with the student evaluations of Writing 20, the first-year writing course taught by Mellon Lecturing Fellows, postdoctoral faculty from fields ranging from architecture and genetics to religion and engineering. “The average evaluation for writing courses rose from between 1 and 2 per course to between 4 and 5 per course,” Chafe said. “This has been the greatest tangible plus of the new curriculum.” Thompson said that research and ethical inquiry courses have also been rated highly. “And students point out that these courses contribute substantially to intellectual growth and development along a number of dimensions — the ability to analyze, to synthesize, to evaluate,” Thompson said.

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Sheila Curran wants first-year students to stop talking about what they are going to do after they graduate. Instead, she’d prefer they spend time examining their interests, values, and passions. A recent transplant from Brown University, Sheila serves as the Fannie Mitchell Executive Director of Duke’s Career Center. As she rounds out her first year on campus, Sheila observes that Duke students are brilliant, articulate, and engaging. However, she remains concerned that too many of them are pre-programmed and have placed themselves in career “boxes,” forging towards an ideal that has not been thoroughly explored.

A human resources professional for 16 years, Sheila knows the value of matching people with jobs (USA Today notes that 40% of adults aged 20-29 feel they chose the wrong career). She believes the role of the Career Center is to help students find this match. Self-reflection and exploration are key steps in this process, and Sheila equates finding a good fit with learning to walk; “everybody does it at a different time.” But that’s not all the Career Center is up to these days. This fall, a team of 20 undergraduate students became the first ever peer career advisors, affectionately called CATs (Career Advising Team). These students, led by Assistant Director Kara Lombardi, go into the residence halls to provide information and resources to students where they live. You’ll also find them staffing the Center’s resource room in the evenings, a more likely time for students to utilize their skills.

Sheila believes one of the biggest problems facing students is knowing what careers and opportunities are available to them. A new initiative, Duke Career Week, will address the need for students to explore careers and to make connections with hundreds of alumni who will descend on campus for the sole purpose of helping students target career interests. Scheduled for the last week of January, Career Week will involve a series of programs and fun events, culminating in a full-day conference with more than 30 concurrent panels. Alumni will speak with students about careers in such diverse areas as sports, government, engineering and marketing. Assistant Director Racquel White co-directs Career Week with staff from Alumni Affairs and the Career Center. She is assisted by student co-directors Georgetta Nicol, T’04 and Jen Wei, T’06. With all these new programs and initiatives, the Career Center is bursting at the seams, literally. A top priority for Sheila is to build a new center, complete with space for on-campus recruiting, student workspace, and exceptional resources.

Sound like an ambitious agenda? Sheila doesn’t think so. “A world-class institution should have top-notch resources to go with it, and a careers program adds significant value to the Duke experience.” Long since departed are stories of working for the same company for 40 years. Current trends have left many reminiscing ‘it isn’t like it used to be.’ You’re right, and Sheila Curran and her staff will see to that.