A physician—an eye surgeon—is crammed into the back of a small, crowded plane on its way from Beijing to Xinjiang in far western China. The engines are loud and the air stifling, so the doctor is standing in the aisle alongside a fellow passenger who happens to speak English. The ophthalmology resident accompanying the doctor, a young man over six feet tall, has somehow folded himself into an undersized seat in the very back. The resident is carrying human corneas on ice in a Styrofoam box. No complaints; a ticket snafu almost left them at the airport. They rock through the flight for hours. And this is only the start of their intense work week on a mission to teach corneal and cataract surgery for ORBIS International, the global nonprofit dedicated to correcting blindness.

The man in the aisle was Kenneth L. Cohen, MD, Professor of Ophthalmology at UNC Eye. Since coming to Carolina in the late ’70s, Cohen has acquired more than a few travel stories on his missions for ORBIS, teaching primarily in China and Southeast Asia. For the past decade, Cohen has been the main teacher for resident corneal surgical education at UNC Eye. That, coupled with his travel experiences, has brought his focus on teaching to a kind of brilliant intensity. Cohen is a man in perpetual motion whose matter-of-fact nature has inspired generations of medical students and residents. What engages him now is improving the way cataract surgery is taught to residents here and to ophthalmologists in the international arena.

This is a far-reaching endeavor. Cataracts are the world’s leading cause of blindness; more than 20 million Americans over 40 are afflicted with them, according to the US Centers for Disease Control and Prevention. Thus, cataract surgery is the major operation ophthalmologists perform after they leave residency training. This delicate, challenging operation involves removing the eye’s clouded lens—the densest tissue in the body—and replacing it with an artificial one. Learning to perform cataract surgery is even more crucial because surgery is now the seventh competency required of ophthalmology residents; other medical residencies require only six.

Cohen estimates that over his career, he has performed 10,000 cataract surgeries. He also has pushed the envelope here for corneal surgery techniques. In 2007, he performed the first Descemet’s stripping endothelial keratoplasty (DSEK) at UNC Eye, an innovative operation that alleviates problems seen with traditional corneal transplant operations. In addition to his duties at UNC Eye, since 2005, Cohen has been a member of the faculty for the Harvard Medical School Intensive Cataract Surgical Training Course, basic instruction for 150 residents given over the course of a weekend.

To reframe the teaching of cataract surgery, Cohen created a comprehensive online course. “The major thing I did, which actually took three years, was to think of all of the steps and issues that are important for the resident to know and understand regarding cataract surgery. I went through my files and downloaded the recent literature that was pertinent information and made a curriculum outline.” He linked thousands of pages of printed material and edited hundreds of hours of video clips from actual surgeries. He also located hundreds of illustrations and had legions of items photographed. At the computer, he demonstrates. “One of the first things is to know the names of all the instruments in the cataract tray. Click on the topic, and you can look at 50 different instruments with a description of each.” Cohen has written each description, has directed each photograph.

The contrast with his own medical training couldn’t be greater. “When I went through, it was: See a surgery, do a surgery, teach a surgery.” And that is how he started out teaching, though over the years, he had updated his teaching as new techniques and technologies came into play.
Then he went to teach the Harvard course, and its structured approach was immediately appealing. "I came back thinking this seems to be the right way to do what is an extremely difficult task," he says. "Harvard crystallized the effort for me. I already had 25 years of structure in my files, and that helped me get it out and organize it so it could be useful."

There are, of course, textbooks; Cohen wrote the chapter on advanced phacoemulsification techniques in Henderson’s Essentials of Cataract Surgery. But, he explains, "Teaching surgery is not like sitting down and just reading a chapter. It has to be integrated. We use the outline and discuss the various stages that they’re then going to practice. I had to set up a surgical lab where the residents can practice the various stages of cataract surgery. And then you go to the operating room, and as a resident, you don’t just sit down and expect to do an entire operation the first time. You expect to do maybe one part of the operation that you’ve practiced in the lab and are prepared to do in the operating room."

Cohen’s course is a key component of UNC Eye’s upward arc as its national reputation strengthens. "Is what I have done—the resident cataract surgical training in particular—in the league with the top 10 eye programs in the country? The answer is yes," he declares. "I know that from graduating residents, from their rotations at hospitals, from the residents I see at Harvard from other surgical programs. We’re doing the right thing."

Cohen most recently prepared a cataract phacoemulsification training course for ORBIS telemedicine’s Cyber-Sight, which includes UNC resident surgical videos. He’ll use that on this fall’s mission to Laos, where he will teach basic phacoemulsification. As is his tradition, he’ll take the chief resident along.

Where was Cohen when he was the same age as his residents? Drafted into the Army during the Vietnam War. The native Chicagoan, the son of a businessman and a homemaker, had majored in mathematics at the University of Michigan, where his two favorite classes were an advanced course in the physics of light and Shakespeare. After medical school at the University of Illinois, he interned in internal medicine at the University of Florida and then chose ophthalmology, a specialty where “there are positive things that can be done.”

For his residency, however, there was no match. World politics had intervened. “At the height of the Vietnam War, if you were going into orthopedics, ENT, or ophthalmology, you couldn’t get an application unless you showed them you were either deferred or had completed your active duty obligation. They didn’t want you drafted out of the residency program. That was just how it was.” He spent two years of active duty at Fort Campbell in Kentucky, then completed his residency at Northwestern University Medical School and a fellowship in cornea and external disease at Medical College of Wisconsin. A phone call from UNC Eye brought him to North Carolina, where he and his wife settled and reared their family.

In his tenure at Carolina, he has seen the department change drastically, for the better, he says, thanks to more faculty and an increasingly higher caliber of residents. He demands more of his residents these days than in the past, he says. “But you know, it’s easy. If you have established a system, and they see the benefits, you don’t have to convince them. Even if they have to put in extra work, it’s not an issue. They are enthusiastic—and inspired.”

What’s the best part of his day? Cohen doesn’t hesitate. “I get more pleasure seeing residents be successful either in the operating room or seeing a patient in the clinic, thinking in the proper way that I’ve taught them to take care of the patient. I don’t have to have a patient telling me how thankful they are because I did a good job. I’m supposed to do a good job. I don’t think that’s it for me any more. Maybe it was 20 years ago, but it’s not now. It’s truly seeing a resident learn something and be interested in it and do it well at it—something that I’ve taught them.”