

Jim O'Brien's career at FSU, in total, has spanned more than 45 years.



O'Brien graduated high school in 1953 in Summit, N.J.



O'Brien taken around 1970.

A legacy in the numbers

Professor Emeritus Jim O'Brien marks a career in mathematical ocean modeling and prolific mentorship

When he was a child, Jim O'Brien was a certified bookworm.

"I'm a nerd," he says. "I'm the kind that, at 12, I'd walk every Saturday to the local library, which was about a mile and a half, return five books and get five more. No television or anything like that, you know."

Most of those books were on mathematics—O'Brien's first academic passion growing up—but by the time he got to college he had fallen into the field of chemistry, which didn't grab his interest as much as he'd hoped it would. While working on his bachelor's degree, he was also in Air Force ROTC and wanted to join the military and become a pilot.

Just as O'Brien was about to graduate in 1957, however, the Air Force changed its enlistment rules so that anyone who wanted to fly had to enlist for five and a half years. He decided he didn't want it that badly, which turned out to be a serendipitous decision. A letter informed him that he would become a meteorologist, and the Air Force sent him to the University of Texas for a year to learn the basics.

"That's the way the world is," O'Brien says. "There are opportunities, and there's luck, and this was just happenstance. When I got the letter that said I was going to be a meteorologist, I had to look it up in the dictionary to find out what it was."

By the end of that year in Texas, O'Brien had found his academic home. Now, nearly 55 years later, he's enjoying a much-deserved semi-retirement from the Department of Earth, Ocean, and Atmospheric Science (EOAS) and taking time to look back on a long and successful career, including 43 years spent at Florida State, countless students mentored (including 44 Ph.D. students), and a wide range of achievements that includes the first numerical description of the El Niño phenomenon.

His influence is such that he's well known not only in his own department but throughout the College of Arts and Sciences, and at least two generations of scientists can trace O'Brien's presence through their entire careers.

"I have known Jim for more than two decades," says Vasu Misra, one of O'Brien's colleagues in EOAS. "First as a teacher of my graduate class, then as a senior colleague in the department and as a co-researcher in a multi-institutional grant for several years. Jim brought tremendous energy, confidence, and scholarship to all of these venues. He's had a lasting impression on many aspiring young scientists."

The long road to Rutgers

O'Brien's parents were Irish immigrants to the United States in 1926—a story that figures heavily in his own understanding of the course of his life and that, when told by O'Brien, involves an in-depth discussion of class in Irish society

and immigrant life in upstate New York and New Jersey. Suffice it to say, O'Brien's parents literally met on the boat to New York City but then lost track of each other and weren't to meet again until a chance encounter in Central Park four years later.

They were married in 1934 and O'Brien, the first of their nine children, was born in 1935.

Neither of O'Brien's parents had much of an education, but he was born with an innate desire to learn. His father was a metallurgical assistant at the famous Bell Labs, working alongside scientists and inventors.

"He was very good at working with his hands," O'Brien says, "and I guess he was a scientist, in a way."

Despite working surrounded by people with doctorates, O'Brien's father didn't want him to go to college, which O'Brien chalks up to the strict understanding of class his parents brought with them from Ireland.

"He came from a society and culture that said you were from a certain class," explains O'Brien. "I was lower class, so I was supposed to get my high school diploma, come home, live at home, get a job, and then bring home the paycheck."

O'Brien dreamed of becoming a teacher, however, and planned on going to a teachers' college despite his father's objections until a counselor at his school who recognized his promise encouraged him to go a step further and enroll in a university. He ended up getting a full scholarship to Rutgers, where, with a little help from the Air Force, he found his path.

Choosing the classroom over the boardroom

After graduating from Rutgers in 1957, O'Brien spent a year working at DuPont chemical company before being called into duty with the Air Force. After a year in the military, during which he served by giving weather briefings to pilots, O'Brien planned to go to graduate school, but circumstances made it difficult. He married his high school sweetheart, Sheila O'Keefe, in 1958, and the couple had their first child shortly after.

O'Brien put his chemistry degree to work again and ended up back at DuPont, moving the family to Wilmington, Del. He applied and was accepted to MIT for graduate school but wasn't offered the financial package he needed to move and support his family, which O'Brien attributes to his mediocre undergraduate GPA.

"At Rutgers, I was not a 3.5 student," he says, "because I worked all the time and I could never handle German. I got Ds in German."

Ultimately, his chance to take his studies to the next level came after two years at DuPont, when a former professor from O'Brien's time at the University of Texas who was moving to Texas A&M helped him get one of 100 new fellowships that NASA was giving out to graduate students around the country. The decision would have been a tough one for most people, but O'Brien doesn't remember fretting over it too much, despite being on track to rise through the corporate ranks.

"To leave a job in which I was getting a 15 percent raise every 13 months, being trained to be an executive with DuPont?" O'Brien shrugs as he recalls this decision, then puts his reasoning simply: "I just loved the science."

So, science it was. At age 29, O'Brien and his wife had their second child just two months before he was to start school, and the whole family drove from Delaware to Texas, where they would live in an old, reconstructed barracks while he studied.

O'Brien finished his Ph.D. in a brisk three and a half years, writing a dissertation on the aftereffects of hurricanes on ocean waters and earning his doctorate in 1966. From there, he took his first academic job at the National Center for Atmospheric Research (NCAR) in Boulder, Colo. While he enjoyed the work, it was a non-teaching position, which left part of O'Brien's dream unfulfilled.



O'Brien poses with recent high school graduates in the United States Navy's Office of Naval Research summer program in 1979. O'Brien mentored students in an air-sea interaction group at FSU.

He got his first chance in front of a classroom in the summer of 1967 with a visiting-lecturer job at FSU while he was on leave from NCAR.

"I said, 'If we can stand Tallahassee in the summer, I guess we can stand it in the winter too,'" O'Brien says.

Not long after, FSU extended O'Brien a more permanent offer to become an associate professor starting in 1969.

"I wasn't really ready to leave NCAR, but they offered me this opportunity to teach so I jumped at it," he says.

Making a statement

O'Brien made his presence on the FSU campus known right away, in part because of his aggressive, forward-looking research and dedication to solid teaching, but also because of his personality.

"Back in the older days, you could always tell if Jim was in the building by the stink of his cigar," says EOAS professor Mark Bourassa.

Since joining the FSU faculty, O'Brien has racked up more achievements and honors than can be fully listed here. His first paper on

El Niño in 1976 broke ground and overcame controversy within the field by explaining and predicting mathematically the behavior of what had previously been a little-understood phenomenon. The work led to an explosion of research around the world, and to greater acceptance that weather around the globe is interconnected and the ocean holds the key to understanding those connections.

"I think that's what we really revolutionized, was recognizing that the ocean carries the memory," he says. "When the ocean changes itself, it does affect climate down the road."

O'Brien was the founding director of FSU's Center for Oceanic and Atmospheric Prediction Studies; received the university's highest faculty honor, being named a Robert O. Lawton Distinguished Professor in 1999; and served as the state climatologist of Florida.

"In his first year as state climatologist, Jim forecast the time in spring that the rains started to the day," says Bourassa. "A stunningly awesome start that got him a lot of positive attention. He applied the same approach the following year and was way off. After that year, he became a believer in probabilistic forecasts. No one can say he was wrong!"

'Much more than a mentor'

Whatever setbacks may have come his way, O'Brien's CV has amassed a daunting number of impressive lines. But questions about his career inevitably bring him to talk about his passion for mentoring students, which, by his own estimation, matches or perhaps even exceeds his love of meteorology itself.

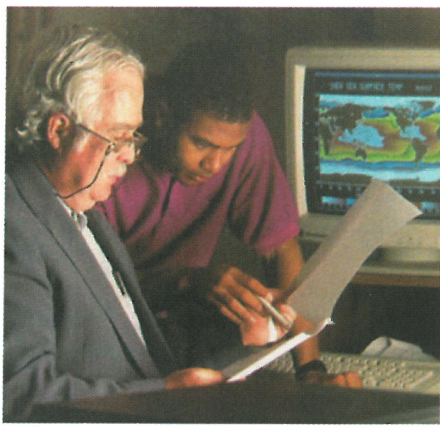
O'Brien believes in pushing students toward independence. Once they pass the master's level and start pursuing a doctorate, he abruptly changes his tactic. While before, he would simply give the answer to a student who encounters a problem in his or her research, Ph.D. candidates who bring problems to his desk simply receive the instruction to come back the next week with the answer.

"The ones that are going to become Ph.D.s—they morph into scientists, and it happens very quickly," O'Brien says. "Most of these kids are kids that are ashamed of every B they ever got in their life. They're really serious students. But they're used to figuring out what the prof wants them to do and giving it back to them."

The moment when the dynamic changes is the one O'Brien lives for.



O'Brien shares a handshake with Vice President Al Gore at a meeting of the United States National Climate Assessment for the Southeast in Nashville, Tenn. O'Brien was chair of the southeast regional climate assessment group.



O'Brien was an early advocate for the importance of computers to meteorological research and teaching. He is pictured here mentoring an undergraduate student in the early 1990s.

"Somewhere along the line, they have to take the bull by the horns and go for it," he says. "And I love that—I mean, I can spot it. I can spot the moment when, all of a sudden, the student doesn't come to me and ask, 'What do I do next, Dr. O'Brien?' but instead says, 'Let me show you what I did.'"

A long career, a long legacy

O'Brien has been father to five children, though two of them died at tragically young ages. His first wife, Sheila, also died in 2004. There's no shortage of family, though, as he counts eight grandchildren between his own and those of his second wife, Kae Ingram, whom he married in 2009.

O'Brien has been officially retired since 2007 (allowing more time for him to indulge his fishing habit), but talking to him now, even after so many years of teaching, it's clear his excitement over the job hasn't faded much. The evidence of a teaching career well spent doesn't only come from O'Brien himself.

"I have always been impressed with the loyalty and affection his students hold for him," says Professor Bill Dewar of EOAS. "They all say he is much more than a graduate student mentor. He keeps in contact throughout their careers and provides them with valuable advice and guidance. I hope I can engender a fraction of this feeling in my graduate students."

Lisan Yu, who worked on her master's and doctoral degrees under O'Brien's guidance from 1987 to 1992, fondly recalls the lessons she learned from him.

"Professor O'Brien taught me not to give up easily," she says. "He is a tough adviser who is strict and challenging, but very fair. He pushes students to the limit of their abilities so that they can fully explore their own potentials and accomplish more."

And despite all the accolades of a long career, it's there—with his students—that O'Brien's legacy will live on more than anywhere else.

"Jim O'Brien has educated and trained several generations of students who have gone on to become leaders in their own right," says M. Yousuff Hussaini, a professor of mathematics and chemical engineering. "Simply said, as a teacher and researcher, he has had a tremendous impact on the oceanic and atmospheric sciences communities."

Having guided a staggering 44 doctoral and more than 80 master's students, O'Brien's love of science and of teaching will no doubt be passed to new generations and continue to enrich not only FSU but institutions all over the country and the world.

A global influence

Jim O'Brien's 44 Ph.D. students hail from 18 countries across the globe:

- Argentina
- Barbados
- Belgium
- Brazil
- Canada
- Chile
- China
- Cuba
- Denmark
- Finland
- France
- Ireland
- Italy
- Japan
- Mexico
- Norway
- Turkey
- United States



O'Brien shows off a just-caught largemouth bass at St. Mark's Wildlife Refuge around 1990. Despite still being a frequent sight around campus, O'Brien, an avid fisherman, has found some time for relaxation since his retirement in 2007.