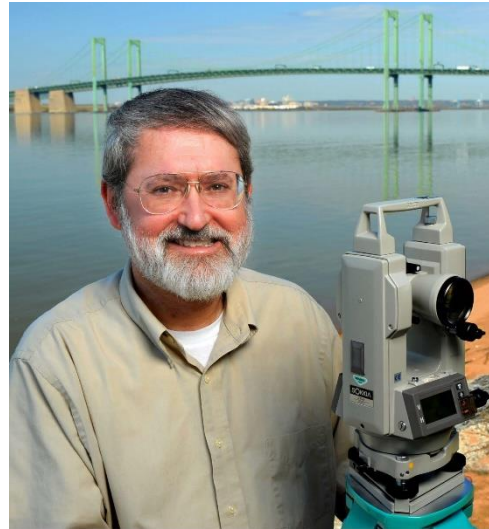


Professor Ralph Dusseau shares what it was like to start a new program

Ralph Dusseau was born in Flint, Michigan and raised in Montrose, Michigan, which is a small town northwest of Flint. His father was a mechanic at AC Sparkplug and his mother a church secretary. Ralph graduated from Hill-McCloy High School in Montrose in 1973. During his last two years of high school and first two years of College at the University of Michigan - Flint, Ralph worked as a bookkeeper for a trucking company. With his wages from bookkeeping, a small scholarship, and wages from working as co-op student at Michigan State University, Ralph paid his own way through his Bachelor's degree.



Ralph graduated from Michigan State with his Bachelor's in Civil Engineering in 1978. He worked for about a year at Bechtel Power Corporation in Ann Arbor, Michigan. He then attended graduate school at the University of Michigan – Ann Arbor for a semester before returning to Michigan State. Ralph graduated from Michigan State with a Master's in Civil Engineering in 1982 and a PhD in Structural Engineering in 1985. He joined the faculty at Wayne State University, in Detroit, MI in 1985 as an Assistant Professor. Ralph obtained tenure and promotion to Associate Professor in 1991. He came to Rowan in 1995 as Professor and Founding Chair of the Civil Engineering Program at Rowan University (then Rowan College) in 1995. He is now a retired Professor Emeritus from Rowan. His primary areas of research were modeling and dynamic and earthquake analysis of bridges and other structures, modeling and dynamic analysis of transit buses, and civil engineering education.

Ralph's main hobbies are model railroading and reading and collecting books related to model railroading, railroad history, and naval history.

[Editors note: because Ralph is the founding chair, his 25@100 entry is a little longer than most, as it should be!]

I originally chose civil engineering as a career because of my interest in water flow. I transitioned to structural engineering as a graduate student because I enjoyed steel and concrete design. I began teaching labs in hydrology as an undergraduate student at Michigan State and continued teaching labs and lecture courses as a graduate student. At Michigan State, my student evaluations for the lecture courses that I taught were all above the faculty average and I enjoyed teaching so much that I decided to become a professor.

I chose to come to Rowan for the challenge of beginning a new School of Engineering (now College of Engineering) and creating a new Civil Engineering Program. In the advertisement for the Rowan position, there was no mention of program chairs (only senior faculty) and the emphasis for the first civil engineering senior faculty position was in the area of environmental engineering. At first, I hesitated to apply because of the environmental emphasis. However, when I showed the advertisement to my wife she said, "don't be silly, they have to hire

structural engineers eventually.” So, with her strong support, I applied. It wasn’t until I arrived on campus, in the middle of my presentation, that Dean Tracey asked me what I would do as Founding Program Chair. I had a hunch that this might happen and so I was ready to pivot in the middle of my presentation and discuss exactly what I would do as Chair. I think I got the job when I said that my priority was to hire the best environmental engineering faculty that I could find. Also, my presentation included a very detailed discussion dealing with ABET accreditation¹ and I think that this also helped a great deal in my getting the job.

Getting accepted by the rest of campus

It took a while for the rest of the Rowan campus to embrace the new college of engineering. In 1995, the four founding program chairs used up the annual State of New Jersey quota of four new full professors at Rowan and thus no other faculty at Rowan were promoted to full professor that year. Our salaries were also significantly higher than other faculty on campus.

Founding Dean Tracey appointed me to the then College Senate (now the University Senate) in 1995 and my subsequent election as Vice President in 1996 allowed me to meet with and begin working closely with a variety of faculty from across the campus. This experience allowed me to have an immediate impact and helped to foster a greater level of acceptance of the new School of Engineering (now College of Engineering) at Rowan and of the new faculty in Engineering.

One of my favorite stories (from 1996 or 1997) was when I served as part of a panel discussion at a faculty symposium about the changes at Rowan. At the time I think I got the invitation because I was the Vice President of the University Senate. As part of the panel discussion, each panelist was asked to make a short presentation. My presentation was entitled “Engineers are People Too!” This presentation and the subsequent Q&A were well received, and I think this helped further ease the tension that still existed between pre-engineering Rowan faculty and the new engineering faculty.

While the relationship between existing Rowan faculty and the new engineering faculty got off to a somewhat rocky start in 1995, by the time that the first engineering class graduated in 2000, the engineering faculty were considered the same as any other faculty at Rowan. When Rowan’s medical schools came online, the other faculty on campus realized that between 1995 and 2000 the engineering faculty had created and grown their programs all within existing Rowan rules and regulations pertaining to the faculty and curricula, unlike the medical schools which came online with their own rules and regulations that are totally separate from Rowan. Thus, the new kids on the block are now the medical schools and medical faculty and not engineering and engineering faculty.

A brand-new program – and Engineering Clinic

Starting new programs was a big challenge. I had the incredible opportunity to work with three exceptional Founding Program Chairs and the Founding Dean to develop four cutting-edge engineering curricula and to recruit and work with an outstanding group of civil engineering faculty to create and grow the Civil Engineering Program. The other departments were Chemical Engineering, Electrical and Computer Engineering, and Mechanical Engineering. My favorite Rowan memory is those first two years working together as part of a team, first with

the four Founding Program Chairs and the Founding Dean and then working with the first three founding faculty that we hired.

We began with four initial curricula for the four engineering programs that were developed and approved by a national committee of scholars before the four Founding Program Chairs were hired. During my first year at Rowan, the four Founding Program Chairs and the Founding Dean took those original curricula and molded them into four closely related curricula bound together by the Engineering Clinic² classes and by the basic math and science courses including a common first two years for all four programs.

The original four engineering curricula developed by the national committee had multidisciplinary experiences during all four years, but these experiences had different names. The four Founding Program Chairs and the Founding Dean came up with the idea of pulling these experiences together into four years (eight consecutive semesters) of hands-on, team-based, multidisciplinary Clinics with each year and each semester having different goals and objectives. Four years of hands-on, team-based, multidisciplinary experiences was a new concept in engineering education at that time.

Another story that I remember well was the time that I was presenting the Civil Engineering curriculum to the Senate Curriculum Committee for the first time in Spring 1996. I had my presentation carefully laid out, but in the middle of the presentation, I suddenly lost my voice (I had been struggling with extreme allergies since moving to New Jersey and losing my voice at that time was not uncommon). I was extremely grateful that my three fellow founding program chairs stepped in and completed my presentation, and we got all four engineering curricula approved.

Build it and they will come

Recruiting the first few classes of students was a major challenge. The first year, the four Founding Program Chairs and the Founding Dean each went with the Rowan engineering student recruiter (who technically worked for Admissions, but actually worked for Dean Tracey and the School of Engineering) to a variety of high schools and community colleges to make presentations and to attend college fairs. In subsequent years the founding dean, the founding chairs, and the founding engineering faculty scheduled and made similar recruiting trips on their own without a Rowan engineering student recruiter. Once our enrollments began to rise steadily, we stopped requiring these recruiting trips. Since then, we have relied on multiple on-campus open houses per year for recruiting prospective students. [Editor's note: In particular, our open houses for accepted students each spring, with excellent participation from faculty and current students, seems to have especially impressed our 25@100 student interviewees.]

Before Rowan Hall was completed in January 1998, the engineering faculty offices, labs, and classrooms were in three main locations: the basement of Campbell Library (years one, two, and three), the south wing of Memorial Hall (years two and three), the basement of Bosshart Hall (years two and three). In addition to the classrooms and labs in Memorial Hall and Bosshart Hall, courses were taught in classrooms across the Rowan campus. Once Rowan Hall was completed in 1998, life was much easier!

A few more stories

I remember a train trip that Dean Tracey and the four founding program chairs made to New York City to visit the then headquarters of the American Association of Engineering Societies (AAES). AAES was in the process of liquidating their library holdings in New York City in preparation for moving to the new AAES headquarters in Kansas City. We tagged almost every engineering book and journal in their collection (which included 100 years of ASCE journals) and had them subsequently moved to Rowan. Even though these books and journals are long gone from Campbell Library with the movement to digital formats, I will always remember that trip to the Big Apple.

One fact that few people may know was that the Founding Dean and the four Founding Program Chairs were NOT given tenure upon arrival at Rowan. By State Law at that time (which only applied to the state teaching colleges and not the state research universities), we all had to wait a minimum of two years before we could apply for tenure. My colleagues at Wayne State thought that I was crazy for giving up tenure at Wayne State to move to Rowan. However, I wanted the challenge of starting a new Civil Engineering Program and if giving up tenure was required then that was the price that I was willing to pay. [Editor's note: I also gave up tenure to come to Rowan. – Jess W. Everett]

Changes over the first 25 years

I believe that the initial civil engineering curriculum was very strong, and the initial changes made by the founding faculty helped to enhance the program. However, the state-mandated reduction of credits from 131 to 120, that applies to all programs in NJ, was unfortunate. The loss of the Introduction to Infrastructure course was especially painful to me as this was a course that I created and taught, and it greatly assisted with student retention from the first to the second years of the Civil Engineering Program. I also believe that eliminating the common first two years for the four engineering programs (with only the clinics in common during the first few years) led to more separation between the engineering programs.

When I interviewed at Rowan in 1995, there was no mention of research. The only emphasis was on quality teaching. This began to change when I got a small grant from the U.S. Geological Survey in my first year (as a carry-over from my years at Wayne State). With this first research grant, the atmosphere seemed to change and research eventually became very important. On the positive side, unlike research universities, this initial change in research emphasis introduced research and research funding into the undergraduate curricula via the clinics.

[Editor's note: As Rowan approaches R1³ status in 2024, Faculty still conduct some of their research with Engineering Clinic student assistance.]

Written by Ralph Dusseau and edited by Jess W. Everett, February 2024.

1. ABET is the organization that accredits “college and university programs in the disciplines of applied and natural science, computing, engineering and engineering technology at the associate, bachelor’s and master’s degree levels.” Accreditation is an important mark of quality. Only students that graduate from an ABET accredited program can become a licensed Professional Engineer. No program can be accredited until it graduates its first class. Spoiler: all four majors were successfully accredited at the earliest possible date!

2. Engineering Clinic is still a hallmark of Rowan University. Students take a Clinic class each semester, eight total. Many are interdisciplinary. All are hands-on. First-year Clinics focus on engineering's place in society and fundamental engineering skills. Sophomore Clinics merge communication coursework with an engineering design experience and are team taught by engineering, writing arts, and rhetoric faculty. Junior and Senior Clinics have students work in teams on research or design projects, usually externally funded.

3. The Carnegie Classifications are a way to categorize Universities. R1 universities have Very High Research Spending and Doctorate Production. Rowan University was R3 when the College of Engineering started in 1996. As of February 2024, it is R2. It will become R1 soon.