

Clay Emerson ('00) remembers being a part of the first Civil & Environmental Engineering class at Rowan

Clay Emerson's mother was a schoolteacher who transitioned to taking care of her growing family. His father flew fighter jets out of Atlantic City and then became a commercial pilot. The family moved to South Jersey, settling in Egg Harbor Township.

Clay's father had an engineering degree. And though he didn't use it directly as a pilot, he liked to solve problems and think critically at home. With Clay's interest in outdoor activities and protecting the environment, the Civil and Environmental Engineering major at Rowan was an obvious fit.



Clay graduated in Rowan's first engineering class in 2000. He went on to complete a Master's at Drexel and a PhD at Villanova in 2008. He is a Professional Engineer¹ and Certified Floodplain Manager and has worked at Princeton Hydro in New Jersey ever since. He is also on the board of trustees of the Cystinosis Research Foundation.

I was part of the very first engineering class at Rowan. When I visited campus the summer of 1996, I met with founding chair Ralph Dusseau in the basement of the library.² I liked the idea of being part of something brand new. And I liked the small class sizes. I was a little worried about the lack of accreditation.³ The entire first class of students were awarded four-year tuition scholarships funded by regional companies. I probably would have gone to Rowan without it, but it made it easier to go to graduate school when the time came.

The engineering faculty had offices in the library. Engineering Clinics⁴ were held in Memorial Hall. I still remember reverse engineering a coffee maker to figure out how it works and redesign it to be more environmentally friendly.

I interned in the summers at a local civil engineering firm which led me to an idea for an invention: a sacrificial opening in roofs to relieve pressure in hurricanes. I worked with Professor Marchese in a junior Clinic to see if the idea could be patented. We made a 3D printed prototype in 1999(!) and tested it in a wind tunnel. Though we eventually decided that roof straps already on the market were a better solution, it was a great experience. Any student with an idea for an invention could work on their idea with an interested professor in a custom Junior or Senior Engineering Clinic.

Professors Marchese and Everett were influential. I bonded with both over a shared interest in music and with Professor Everett about the environment. Electrical and Computer Engineering professors allowed me to sit in on some of their labs to make guitar effect pedals and simple synthesizers. This fostered a life-long interest in music and electronics.

I lined up both a job and graduate school after graduation. I worked the engineering job that summer and, although they tried to get me to stay, I started graduate school at Drexel in the Fall of 2000. I studied stormwater management and the effects of urbanization on a watershed

near Valley Forge. Although I had job offers after finishing my Masters, I decided to start a PhD under Professor Rob Traver at Villanova instead. I graduated in 2008. My dissertation was 'Evaluation of Infiltration Practices as a Means to Control Stormwater Runoff'. Since graduating, I have taught at Rowan and Villanova as an adjunct professor.

I started work at Princeton Hydro in 2008, in Trenton, NJ. I specialize in water resources engineering including floodplain and stormwater management, expert review, and dam removal. Princeton Hydro currently employs seven Rowan engineering graduates plus some non-engineering Rowan grads. I've found that Rowan engineering grads have good communication skills relative to their peers. I remember my Sophomore Clinics, where we learned how to write and speak, and how that was reinforced in our other classes. So much of my current work is communication. I tell new employees that your results, calculations, and analyses are only as good as how well you can communicate them to the client, regulator, judge, jury, planning board member etc. If you cannot effectively explain it, you might as well not have done it.

My time at Rowan was well-spent. I did not realize at the time how important it was and how it set me up for success.

Based on an Interview with Jess W. Everett on January 26, 2024

1. The Professional Engineer license (PE) is a "standard recognized by employers and their clients, by governments and by the public as an assurance of dedication, skill and quality...Only PEs can sign and seal engineering drawings...To become a Licensed Professional Engineer, you must do four things: graduate from an accredited engineering program, pass the Fundamentals of Engineering (FE) exam, work with a professional engineer for four years, and pass the Principles and Practice of Engineering exam."
2. Rowan Hall, the engineering building, would open in 1998.
3. The Rowan engineering programs could not obtain accreditation until the first class graduated. Spoiler: all four majors were successfully accredited at the earliest possible date! Clay got his accredited engineering degree.
4. Engineering Clinic is 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 give students to work in teams an opportunity to work on research or design projects, usually externally funded.