

History

The Competitive Edge in the Information Age

Education and experience gained from an industrial background - but not because that knowledge is unnecessary in the current era available when needed in today's work-based virtual experience laboratory.

The virtual laboratory is the industrial history of the information age. It can replicate the development processes of the industrial era.

People everywhere talk about the competitive edge needed in education or academic preparation in the global marketplace. Much of this talk is just rhetoric on the elements of the competitive edge, but we would be wise to remember Cluskey's comment that "upon the education of the people the strength of the nation depends."

In the Beginning...

EARLY DAYS College of Engineering



Dean Benton



T

he year 1910 looked auspicious. Neon lights first brightened city nights. A tiny airplane made the first takeoff from a ship's deck. And

Florida's first College of Engineering was launched with five faculty members and 48 students. John R. Benton, a University of Florida engineering and physics professor since 1906, was named dean of these pioneers.

By fall 1910, UF had graduated its first engineers, from the founding class of 1906: Ossian W. Drake, BSEE, Lakeland; Ralph D. Rader, BSCE, Miami; Harry L. Thompson, BSCE, Pensacola. The new college offered mechanical engineering for the first time, as well as improved studies in civil and electrical engineering, for \$120/year, including room, board, and heat. Admission required the equivalent of an 11th grade education.

Florida was still largely frontier in 1910. Jacksonville was the largest city, at 28,249 people, followed by Pensacola, Key West and Tampa. Tiny Gainesville had paved the road out beyond the edge of town to its prized new university. UF was a typical new Florida development - buildings scattered across an expanse of flat sand, wiry grass, tall pines and stubby shrubbery. The 1910 yearbook speaks wistfully of newly planted hardwood trees that would provide abundant shade in a few years.

Florida itself was busy at the work of creating new societies - building infrastructure. Engineers were developing railroads, port facilities, highways, bridges, and, above all, drainage systems. Telephone, telegraph and electric power networks were beginning to find their way across Florida. The need for ice-making and cold storage plants was obvious.

At the university's dedication in October 1906, N.P. Bryan, chairman of the Board of Control (the early version of the Board of Regents), had spoken prophetic-

ly for students at the new College of Engineering. "The time is past when 'a soft hand in a kid glove' is the badge of a gentleman. It is no longer undignified to labor."

Engineering students had ample opportunity to practice the dignity of labor. The civil engineering department in 1909-1910 did extensive survey work on local county roads, and planned and directed construction work on campus and in and around Gainesville. Students involved in the road survey work, and who liked the camaraderie, organized into the Transit Club. The Transit Club announced its aim in life in the 1910 annual: "To impress ourselves and everybody else with the fact that as Civil Engineers are the Aristocracy of Practical Men, so Civil Engineering students are the natural leaders among those who do good things in the University. — Also, incidentally, to help each other land good jobs during vacations — and last, but not least, to have a good feed occasionally."

The first new engineering building was completed in 1911 at the urging of UF President Murphree, who had been complaining that UF lacked classroom space. Later named Benton Hall, it was located on the site of the current Grinter Hall. The new structure had a few problems. For one thing, the building did not have a boiler for heat. Proving that engineers are problem solvers, Dean Benton wrote, "For the present, we can heat the lecture rooms with cheap wood stoves, running the pipe out through the window by removing the windowpane at very little expense. With proper care and attention, which we shall provide, this could be done more or less safely."

Making do on a limited budget was essential in a state that, 30 years earlier, had nearly ended public high school education in a cost-cutting move. Nor were faculty overpaid. The average salary in 1911 was \$1,550 per year. UF Salaries in 1916 were still 44th in the nation - when there were only 48 states in the union.

Nevertheless, the college was proud of its new headquarters and bragged in the 1912 college catalog: "It is a 3-story brick building, 122 feet by 73 feet, with a one-story wing for boilers and steam engine laboratory. It provides classrooms and drafting rooms for all of the engineering departments of instruction, and various special laboratories, such as the hydraulic laboratory, dynamo laboratory, steam engine laboratory, and laboratory for testing materials."

The college was ready to carry out its mission, as stated in the catalog: *Scholastic training alone cannot make a competent engineer...It can, however, fit a man to enter the profession of engineering; and it is an important element in ultimate success in that profession.*

The engineering students were finding their identity, too. In 1914, the Transit Club and the Kelvin Engineering Club consolidated to form the Benton Engineering Society. The student newspaper reported that, "The Engineering College met Monday evening [May 20] and accepted a constitution for its future guidance. This organization shall be known as the Benton Engineering Society and was organized for the purpose of participating in debates and to promote social functions for its members."

By 1915, the college had 35 graduates, with 23 actually employed in engineering. The college starting expanding its facilities, asking for a forge and foundry, estimated at \$4,000, and a wood and machine shop, estimated at \$21,000.

On the eve of U.S. entry into World War I, the college had 104 students and chemical engineering had been added to the curriculum. The college had begun to notice competition for students, commenting in the 1917 University Record: "Due to lack of advertising facilities, an aid so much employed by most colleges, many young men of our state are ignorant of the remarkable opportunities offered by their own home institution, and enroll elsewhere for a technical training."

A different kind of student arrived at the college in 1918 for the Army training school and the war-measures school for radio operators. The college felt ready for the challenge, stating in The University Record, "In the present great war of nations, the most important branch of the service is that of the engineers, and the war department is almost daily sending admonitions to the student engineers to complete their courses so as to be of the most benefit to the government.

After the war it will depend largely on the quality of the practicing engineers as to how soon the stricken parts of Europe are rebuilt and the world set on its feet again."

Certainly, by 1919, the college needed to expand the engineering building again. A south wing was completed that year, for use as a woodshop, a forge, and a foundry. Funds had been appropriated to cover both construction and equipment, but costs were climbing and the funds turned out to be enough for construction only. It was hoped the legislature would appropriate the money for equipment that year.

So, the pattern was set. Demands for new technology spurred new engineering studies, which attracted more students, who required more facilities. The college was growing.

In the next issue of **The Florida Engineer**, we will trace the path of the college through the '20s.

Editor's Note: This is the first in a series of articles on the history of the College of Engineering. We would like very much to hear from alumni, faculty, and friends who remember some special event or person, and would like to share their memories with us. While each magazine article will be fairly brief, we are planning to expand this material into book length. We hope to publish this book in the year 2000. That's not very far away, folks, so we need to start collecting your stories right away. Any pictures you want to share will be welcome, too, and will be returned. Our surface mail and e-mail addresses and telephone numbers are on the inside front cover. —Martha Dobson