

They Let the Cuff Out

From a suckling infant to a man of Bunyan stature—that's the record the College of Engineering proudly boasts

The 1901-02 O.U. catalog listed "courses introductory to work in engineering." It also stated "full courses not yet offered nor degrees granted along the lines of civil, mechanical, electrical or sanitary engineering."

That's how young the College of Engineering is. But this growing youngster is no weakling. Eleven schools in the college now grant degrees, some of them rated among the best in the nation.

The late J. H. Felgar, dean of the college from the time it was organized in 1908 until he resigned in 1937, once commented on the greatest obstacle the growing college had to overcome:

"It seems a crowded condition has been our natural environment."

The "youngster" has outgrown his breeches several times, and has had to get along with temporary lengthenings of the cuffs.

In the beginning the classes and laboratories occupied temporary frame buildings near the present Women's Building. In 1910 the first part of the engineering laboratory building was occupied, and by 1925 the college had moved into the Engineering building.

When World War II veterans began coming to OU to major in engineering, another cuff lengthening was in order. This time it was an addition to the Engineering Building, almost twice as large as the original structure.

This year 2,650 students, enrolled in the College of Engineering, participated in the 37th anniversary of celebrating St. Pat at O.U.

Schools and departments teaching these engineers of tomorrow present a profile of engineering training at O.U. in 1950:



Bruce Goff
Chairman
**School of
Architecture**

When the State Department asked the American Institute of Architects to select six American schools of architecture to prepare exhibits which would represent this country in an international exhibit, the OU school was placed on the list.

That was last year, and the work of O.U. students is now touring the world.

Bruce Goff, chairman of the school, is proud of the fact that not only was O.U. the only school in the Southwest to be selected, but that it was allotted more space in the exhibit than any other school.

Goff refused offers of other schools when he came to O.U. in 1947 because he "believed O.U. offered the best advantage to develop a school of architecture with emphasis on individuality."

And the O.U. school is just that.

Goff explains the teaching technique used in the school as "bringing ideas out of people rather

Today's student of engineering at the University has many schools and departments from which to select his major work. John Wagoner, '51, feature editor of the *Sooner* gives a brief sketch of the available facilities.

than pouring them in." The formula calls for a creative approach to the subject, along with a co-ordination of structural engineering and architecture.

The faculty of the school includes only professional architects who carry on their private work while instructing. Goff believes that professional teachers do not have "the practical approach working architects bring into the classroom."

The creative approach which characterizes the school has brought several men to the faculty who, like Goff, turned down other offers.

The reputation of the school has drawn students from Europe, Asia, South America, Hawaii, Canada and Mexico. Last September the enrolment included 50 students who had transferred from other schools to study at O.U.

Goff admits criticism has been levelled at the school for its emphasis on creative individuality. His answer: "The proof of the pudding is the results the school has had with its finished product—the graduate."

Last semester there were more requests for graduates than there were students. And the school often gets requests from architects who "want more graduates like the last one you sent us."



R. G. Fowler
Chairman
**School of
Engineering Physics**

In 1930 the O.U. School of Engineering Physics had one major student. Today 70 students are majoring in engineering physics.

Dr. R. G. Fowler, chairman of the school, explains that the enrolment has mushroomed like an atomic cloud. The physicist is at last finding a place where his services are demanded and needed.

High explosives, poison gas and antiseptics focused attention of the world on chemistry during World War I. Radar, nuclear power and aviation pointed to the skills of the physicist in World War II.

Prior to 1930 little use was made of any sort of physicist outside university laboratories, Dr. Fowler explains. Since that time an increasing demand has come from industrial laboratories, which have learned their problems are suited for physical study.

In addition, new developments have created a demand for men with engineering training who

are competent to understand basic situations of science.

And Fowler points to the growing desire of students, intrigued by new developments, to study engineering and at the same time learn about the science from which the developments derive. This has been a major factor in increasing enrolment in engineering physics.

Created in 1923, the school of engineering physics was largely born of the foresight of Dr. Homer L. Dodge.

The work of the school, Dr. Fowler explains, is "to equip the student with an engineering approach to basic science, and simultaneously to use the science training as a means of developing engineers with broad horizons, competent to deal with the changes of our times."

Now housed in the new Research Institute building, the School of Engineering Physics is staffed by 10 men. Future plans call for more courses which will unify engineering and science, the keynote of Dr. Fowler's program.



John C. Calhoun
Chairman
**School of
Petroleum Engineering**

A trained engineer is the end product of the School of Petroleum Engineering.

Dr. John C. Calhoun, Jr., chairman of the school, believes the petroleum engineering student should be well-grounded in engineering first. Then he should be specialized in petroleum production.

Out of 146 hours required for graduation in the School of Petroleum Engineering only 27 hours in petroleum engineering are required. That's only slightly more than 18 per cent of the total.

Calhoun explains that the engineering school is fast growing away from a trade school atmosphere by placing emphasis on engineering principles rather than on specific problems and techniques.

Since 1946, the school's teaching staff has grown from three to nine. During the same period, graduate student enrolment has increased from two to 18, making the O.U. graduate school of petroleum engineering the second largest in the nation.

In recent years the school has included more laboratory work in the curriculum to cover a greater field in engineering. The school now occupies almost one-third of the new wing of the engineering building. O.U. graduates will remember the petroleum school formerly was housed in a building with the School of Chemical Engineering.

The petroleum school's international reputation draws students each year from not only Canada and Latin America but from Asiatic countries. Graduates of the school are found in oil fields the world over.

Dr. Calhoun points with pride to his January

employment record. Ninety percent of the 1950 graduates have been placed with oil companies.

Carl A. Moore

Chairman

**School of
Geological Engineering**



All 30 students who graduated from the O.U. School of Geological Engineering last January either have jobs or have been offered jobs.

This amazing record is presented by Dr. Carl A. Moore, director of the School of Geological Engineering.

Why are geological engineers so much in demand? Because they are just what the name implies—geologists with a background in engineering. And when potential employers come to Norman to interview engineering students, they often demand these two requirements.

The school, which divides its curriculum between the College of Engineering and the School of Geology, has an enrolment of 145 undergraduates. Eight students are now working on advanced degrees.

Moore believes the students should be given a thorough workout in the school. He confides that there is just one "easy" course in the whole curriculum of 145 hours. And he isn't telling anyone what that particular course is.

Moore explains the evolution of the geological engineer this way:

"For many years a survey of the desires and needs of the petroleum industry has been made to construct a curriculum for training the ideal petroleum geologist. The result of this effort is the geological engineer."

Moore told of a recent incident which indicates the way employers regard training in the School of Geological Engineering. He asked a petroleum company when a particular group of students should request interviews for positions. The answer:

"If they're O.U. graduates, we'll place them with our company."



J. W. Keeley

Chairman

**School of
Civil Engineering**

J. W. Keeley, professor of civil engineering, explains that the school has made its greatest stride in recent years by organizing work in structural and sanitary engineering leading to a master's degree.

Specialization in sanitary engineering is the newest option in the fields of concentration offered by the school.

Whether it's a problem in constructing buildings in a way to aid in rodent control or damming a stream, the civil engineer is consulted. The engineer who does these jobs is defined by Keeley as "one who designs and constructs features necessary to man's welfare."

Since 1941 the faculty of the school has doubled

—from five instructors to ten. During the same period the graduate student enrolment has grown from none to ten. And in June, 1950, the school will have 60 students who will be candidates for degrees.

The success of graduates of the school is an old story:

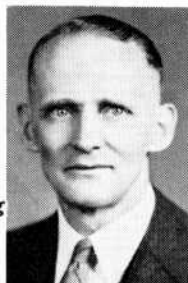
One is city engineer at Oklahoma City, one a district engineer for CAA, one a chief engineer for a hydro-electric company, and one the head of the school of aeronautical engineering in a western university.

The job situation for O.U. graduates in civil engineering is good. A 100 percent employment for 1950 January graduates is reported by Keeley.

E. F. Dawson

Chairman

**School of
Mechanical Engineering**



As long as civilization continues to advance, there will be mechanical engineers.

E. F. Dawson, chairman of the School of Mechanical Engineering, looked out the window and pointed to the construction activities in progress on the Memorial Union Building addition.

"A civil engineering project," he said. "But for every civil engineer who will work on that job, several mechanical engineers will be needed to supply him with equipment and tools."

Twenty-two years ago Dawson and W. H. Carson, now dean of the College of Engineering, were the only faculty members of the O.U. School of Mechanical Engineering. Now the school includes almost 20 per cent of the total enrolment of the college. It has a staff of 15, including three men in the department of aeronautical engineering.

Designed to give the engineering student a background in mechanical engineering without particular specialization, the curriculum of the school has been altered recently. More electives allow the student to broaden his field, and at the same time give him the necessary engineering courses.

Dawson says recent graduates of the school have had "to beat the bushes to find jobs." But most of them have found employment.

He describes the mechanical engineering job situation as "the worst in 22 years." The reason, he says, is that companies overhired immediately after the war. This, added to a waiting to see how government control and the economy are going, has caused the decrease in openings in the field.



Students in Mechanical Engineering 266 studying the working mechanism of a National Transit Gas Engine. New equipment and additional space give the 1950 O.U. engineering student more practical experience with machines with which they will be working when they become tomorrow's engineers.

But the mechanical engineer will always be with us, Dawson says. He's the engineer behind the engineer.



R. L. Huntington
Chairman
**School of
 Chemical Engineering**

Take a knowledge of chemistry, physics, mathematics, economics, and training in chemical plant operation; mix well with years of study. That's the formula for producing a chemical engineer.

O.U.'s School of Chemical Engineering is using this formula in training 132 undergraduates who are enrolled in the school for the 1950 spring term. Also enrolled are 17 graduate students, including

two from China and one from India.

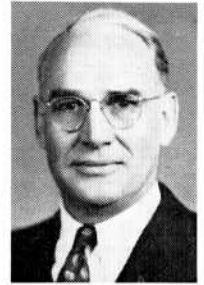
The chemical engineer has been defined as one who is engaged in the design and maintenance of the processes in which chemistry is applied on an industrial scale. But even chemical engineers have difficulty defining their work.

Dr. R. L. Huntington, '17ba, chairman of the School of Chemical Engineering, believes it best to define the chemical engineer by telling what he does:

"Designing, building and equipping chemical plants as well as operating them has always posed engineering problems of a difficult and highly specialized nature. The increasing number and complexity of these problems soon brought the realization that there was not only a place but actually a great need for a new branch of engineering. So chemical engineering was evolved, not as a mixture of chemistry and mechanical or civil engineering, but as a profession based largely on various unit operations."

In 1940 the O.U. School of Chemical Engineering was the first school of chemical engineering in the entire Southwest to receive recognition from the American Institute of Chemical Engineers and the

Engineering Council for Professional Development. That was only three years after it was incorporated into the College of Engineering.



R. V. James
Chairman
**School of
 General Engineering**

Until recent years, most industrialists didn't know what a general engineer is. In fact, the O.U. School of General Engineering has been turning out graduates only since 1932.

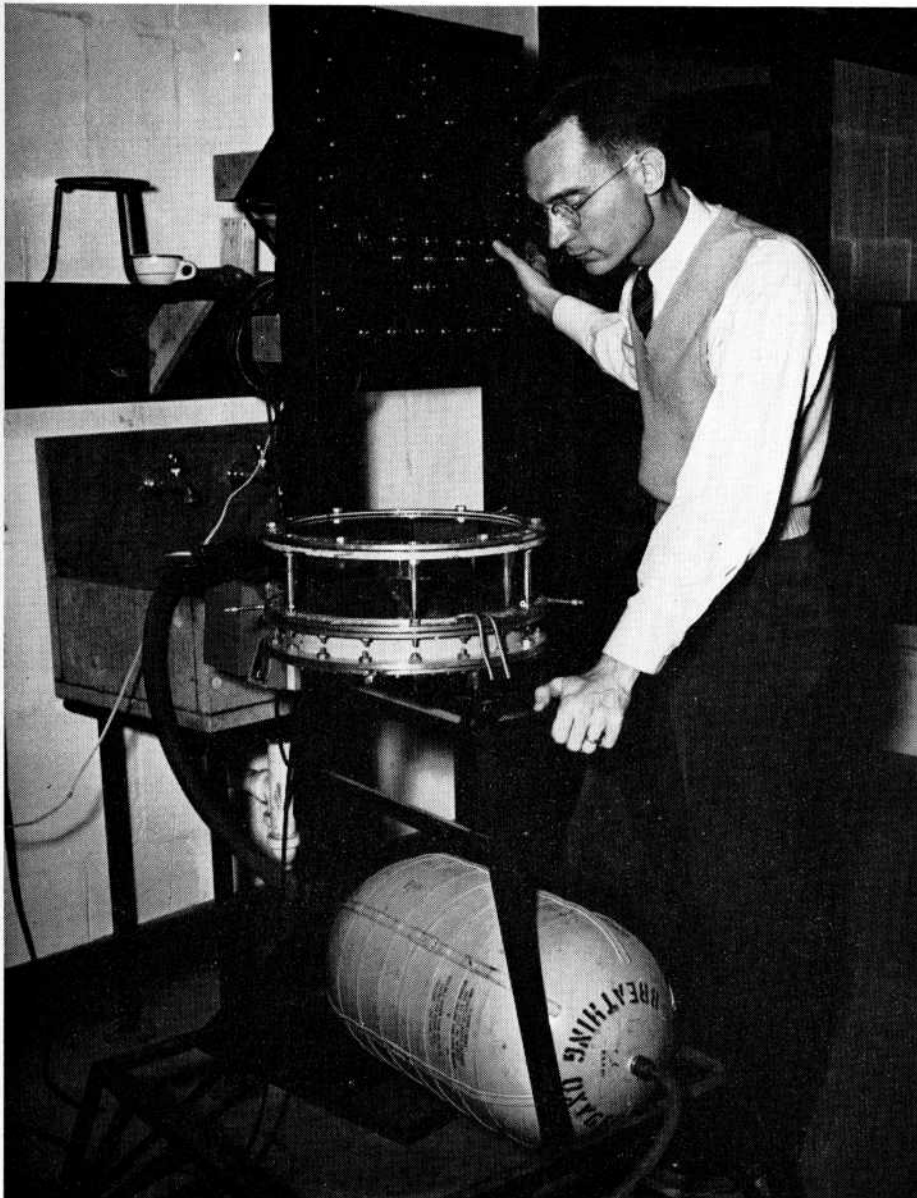
"But now that prospective employers are learning what a general engineer is equipped to do, many of them are demanding men with this sort of training," says R. V. James, '18eng, only faculty member of this unique school.

Organized to provide a more general and liberalized training than is obtained from specialized courses in the College of Engineering, the school selects its curriculum from the courses in the various schools in the college.

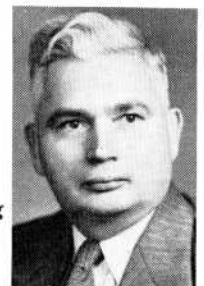
With an enrolment of 32 undergraduates who are above sophomore classification, the school expects to graduate 15 men at the end of the spring semester.

O.U. is one of the few colleges of engineering in the United States which has an organized school of general engineering. It's curriculum is organized to allow the selection of professional courses from more than one field, with a number of electives which enable the student to "specialize" for graduate work.

Graduates of the school are employed in almost every field associated with engineering, ranging from factory public relations to petroleum production.



Glenn Bright, '49eng, graduate student in engineering physics, practically lives with the cloud chamber he's building as a project for his master's degree. Typical of projects being carried out by graduate engineering students at O.U., the device is used to study nuclear particles.



Clyde L. Farrar
Chairman
**School of
 Electrical Engineering**

Almost 50 percent of the graduates of the O.U. School of Electrical Engineering find employment in Oklahoma, Clyde L. Farrar, chairman of the school, reports.

Graduates who stay in the state are about equally divided between the utility companies and the petroleum industry. Of those who leave the state, many return as factory representatives for the Oklahoma area.

The school which turns out these graduates has increased its faculty from five to 11 since 1941. It has an enrolment of 240 undergraduates and ten graduates for the 1950 spring term. Approximately 50 of these students will be candidates for degrees in June.

Included in the enrolment are several foreign students, among them a graduate student from India and a graduate student from China.

The curriculum of the school is designed to turn out graduates which conform to Farrar's definition of an electrical engineer:

"One who is able to conduct or direct work involving the theory and practical application of electricity."

The school had a batting average of "about 75 percent" in finding jobs for 1950 January graduates. Farrar says the employment situation is tightening up in electrical engineering, but "those who work at it are finding good jobs."

R. A. Hardin

Chairman

**School of
Industrial Management**



O.U.'s School of Industrial Management is a 2-year-old youngster with 40 major students.

Dr. R. A. Hardin, chairman of the new school, defines an industrial management engineer by what he does:

"Industrial engineering and management is concerned with co-ordinating the use of men, materials and machines in economic and other engineering associations."

To equip the student for this job, the school has a curriculum which includes approximately 40 hours in the College of Business Administration and the same number of hours in the College of Engineering.

In his first year the industrial management student follows the same course of study as the general engineering student. He begins courses in business management in his second year, and in his third and fourth years—when the regular engineering student is specializing in some field—he continues a combined course in engineering and business.

So far the school has graduated two students. One is now working on a master's degree in industrial engineering, and the other is employed by an oil company.

Six students will be candidates for degrees in June, 1950. They're trained in plant management, production control, production rating, time and motion study and efficiency engineering.

In addition to the 11 degree-granting schools in the College of Engineering, four departments have been organized to train students in technical phases of engineering.

Professor L. A. Comp heads the Department of Aeronautical Engineering; Professor F. C. Morris directs the Department of Engineering Drawing; Professor F. Lowell Jackson is in charge of the Department of Industrial Education; and Professor Fred Mouck is acting chairman of the Department of Mechanics.

► Dr. R. L. Huntington, '17ba, chairman of the School of Chemical Engineering went to Houston, where he attended the Regional meeting of the American Institute of Chemical Engineers. He also inspected the chemical engineering laboratories at Texas A.&M. and Rice Universities, February 25-March 1.

► Dr. John C. Calhoun, Jr., chairman of the School of Petroleum Engineering, attended the American Petroleum Institute Regional Meeting at Dallas, March 8-10.

► S. H. Wendler, professor of chemistry, is now in Oak Ridge, Tennessee, where he is taking courses at the Oak Ridge Institute for Nuclear Studies. The courses are from March 8 to April 10.

O.U.'s Senior Dean

The Second Quarter

Dean W. H. Carson began his second quarter of service to the University in January.

By globe-trotting in 19 foreign countries, Dean W. H. Carson has acquired first-hand a world point of view. And the University through the years has had the benefit of his metropolitan knowledge.

When the Engineers Club of Tulsa named Dean Carson "engineer of the month" last January, the recognition came on an important anniversary, though the Tulsans didn't know it then.

January 19 was the 25th anniversary of the date Carson joined the College of Engineering at Norman.

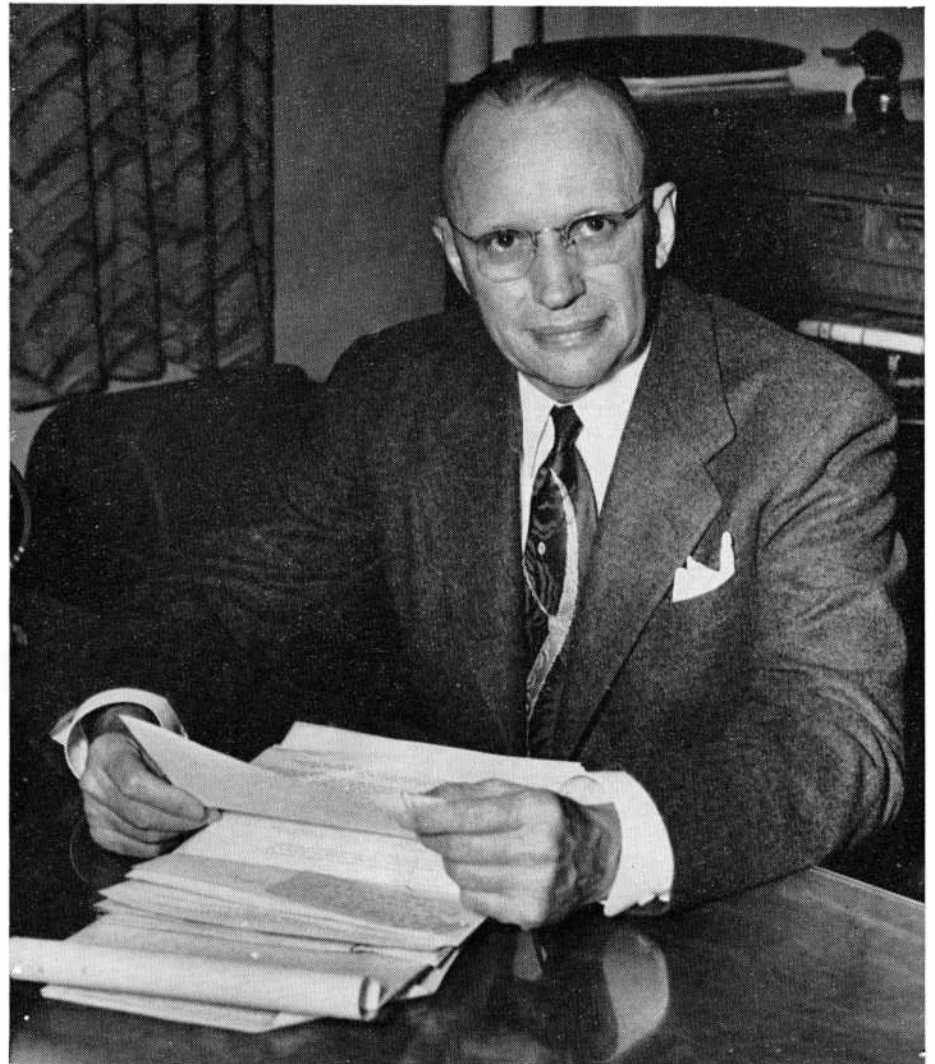
When Dr. J. H. Felgar resigned the deanship in 1937, Carson was appointed to the position for the 1937-38 school term. He is now the oldest dean in point of service at the University of Oklahoma, giving him the distinction of being "Senior Dean."

During the quarter century Dean Carson has served the college, he has shown that his engineering type of mind is the kind which recognizes a

problem, analyzes it, and then gets action. As director of the academic program of the School of Petroleum Engineering, he brought world-wide recognition to the school; a more recent achievement of the "Carson formula" is the completion of the addition to the engineering building which includes the Petroleum Engineering School and the Engineering Laboratories.

Forty-one years old when he was appointed to the deanship, Carson was then one of the youngest deans at O.U. He's still a young man when it comes to globe-trotting in the interest of the University and its graduates. He has traveled in Canada, Mexico, Cuba, Panama, Columbia, Venezuela, Brazil, England, France, Switzerland, Italy, Portugal, Spain, Lebanon, Saudi Arabia, Syria and Egypt.

Always with an eye to the future, the dean has an open mind which readily accepts ideas for any value they may have. He startled Norman in July, 1947, when he calmly announced that he had seen three strange objects flying west over the city; they



W. H. Carson, O.U.'s senior dean, completed his 25th year at the University January 19. When the Sooner photographer snapped this picture, Carson's secretary quipped: "It won't be typical unless you show the line of students waiting to see him."