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Challenge...Opportunity. An Engineering Scholarship Program for Minority Students Pamphlet

Commission for Blacks

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Challenge. . . Opportunity

An Engineering Scholarship Program for Minority Students

**College of Engineering
The University of Tennessee
Knoxville**

"I have a dream that one day this nation will rise up and live out the true meaning of its creed: 'We hold these truths to be self-evident, that all men are created equal.' "

—Dr. Martin Luther King



The engineering profession is wide open. More so than ever. You may not have thought that engineering would be a career for you, but we believe it just might be your bag, and because of this we've designed a brand new scholarship program to help you get it together. Starting salaries are on the rise and the demand for your talents as a trained engineer is quite high. The challenge to engineers has certainly never been greater, considering the problems we now face, such as the energy crisis, pollution, the population explosion, and so on. Remember Eldridge Cleaver's statement, "If you're not part of the solution, you're part of the problem"? We think imaginative young people are the keys to finding the solutions.

With this newly designed program, we hope to begin filling the ethnic gap that now exists in the profession, with highly motivated young people. We feel we offer the encouragement necessary to achieve new educational goals in engineering.



"The real problem today, in professional and managerial levels, is not one of demand, but of supply."

WHAT'S IT ALL ABOUT?

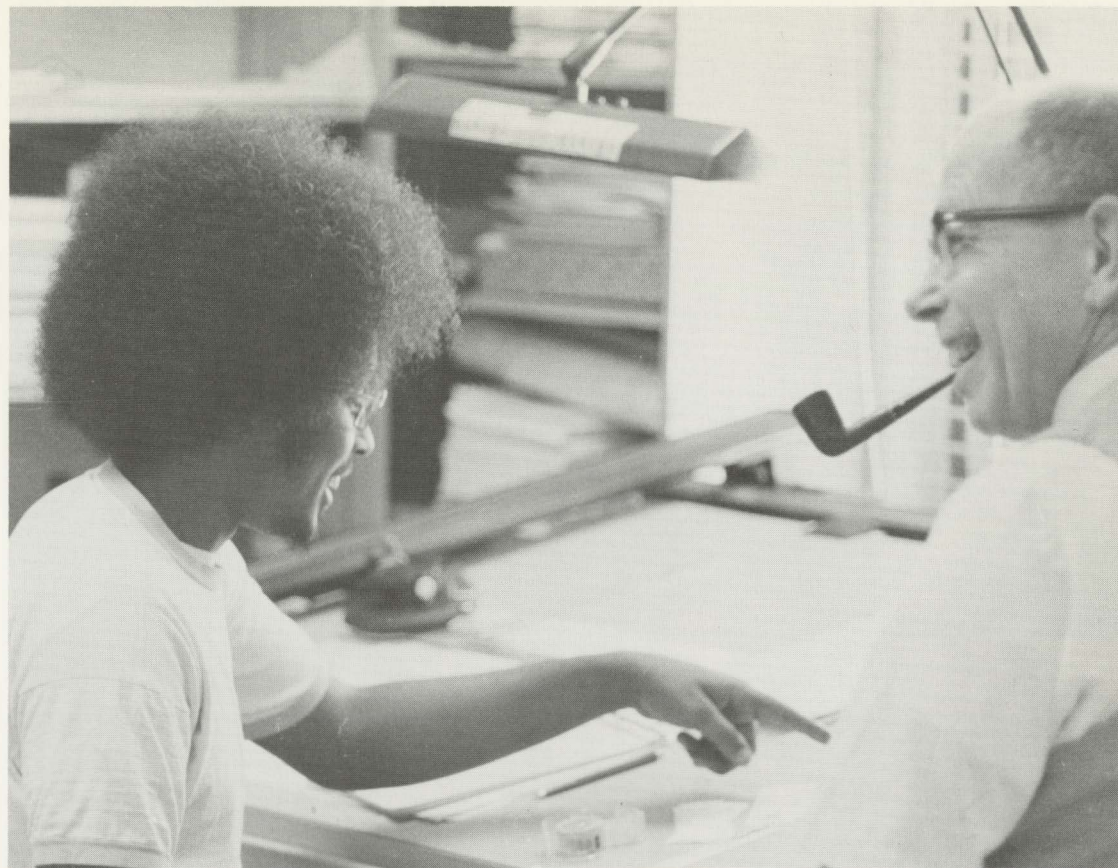
Generally speaking, this program is designed to increase black representation in the engineering profession by increasing the number of black engineering graduates. At present, black enrollments in engineering are far below current population norms, and this is an error we are trying to reverse. Nationally, only about 400 black engineers are graduated each year. So that population norms of black engineers in American industry will become a reality, 6,000 black engineering graduates must go to work in the profession annually.

If we do our part in attaining these norms, UTK should graduate about 60 black engineers per year, requiring a freshman enrollment of approximately 100 new black engineering students annually, a tenfold expansion of current enrollment.

Many universities recognize the need for better representation of blacks in engineering and already offer scholarship programs. In fact, many of the South's black engineering students are going to Northern universities to study under expense-paid scholarships. Now UTK has a scholarship program of its own. We have developed this five-year program because the South needs these future professional engineers and because a qualified black student certainly shouldn't have to go out of state to seek scholarship and academic assistance. We feel this assistance is needed to help these qualified students enter the engineering profession.

Specifically, this program provides a limited number of five-year engineering scholarships for qualified black students. A number of businesses and industries help to sponsor this program both financially and by offering co-op employment. The number of scholarships offered each year may vary depending upon financial support for the program.

"I think the record will show that the big employers in the industrial field have very thoroughly removed the formal and informal barriers and have demanded results—visible, working minority people on the payroll in professional and managerial positions."



WHO IS ELIGIBLE?

Any black student is eligible for this program who meets the requirements for admission to the College of Engineering at UT Knoxville, as outlined in the General Catalog. As with all prospective engineering students, applicants to this program should have:

- a genuine interest in mathematics
- an interest in science and curiosity about "what makes things work"
- an interest in relating to people
- the ability to work effectively in group efforts
- a strong sense of personal responsibility and desire to do something useful.



"Until industry can get large numbers of black engineers, blacks cannot become a significant element in top professional and managerial ranks."

HOW DOES THIS PROGRAM OPERATE?

A group of black students will be chosen each year from high school seniors who are interested in a career in engineering and who are academically qualified.

Students chosen for this scholarship program will work in industrial employment during the summer quarter following high school graduation. This period of industrial employment will help the student become job-oriented and learn about the work of an engineer through valuable on-the-job experience.

Students will be placed in companies which will provide continuing co-op employment after satisfactory academic performance in the freshman year. It is absolutely necessary that, once enrolled in the program, students maintain at least a "C" average, as very few employers are willing to accept a freshman with an overall average below "C".

In addition to their co-op employment, students participating in this program will receive grant-in-aid scholarships of \$750 per quarter during the three academic quarters of full-time study in the freshman year. This money will be used for tuition, books, fees, tutorial, remedial, or other instruction, housing, food, medical insurance, and other University-related expenses. For the six quarters of full-time study during the sophomore and junior years, a \$300-per-quarter scholarship will be furnished to supplement the student's savings from earnings accumulated during co-op work periods. Experience has shown that the average co-op student can save about \$450 above normal living expenses from each work period. During his senior year, the student will receive a scholarship of \$500 per quarter for the last three quarters of full-time study.

"According to a study of blacks in engineering by Lucius Walker of Howard University, only one-half of one percent of the engineers in the nation were black in 1960—and that proportion did not increase at all by 1970!"



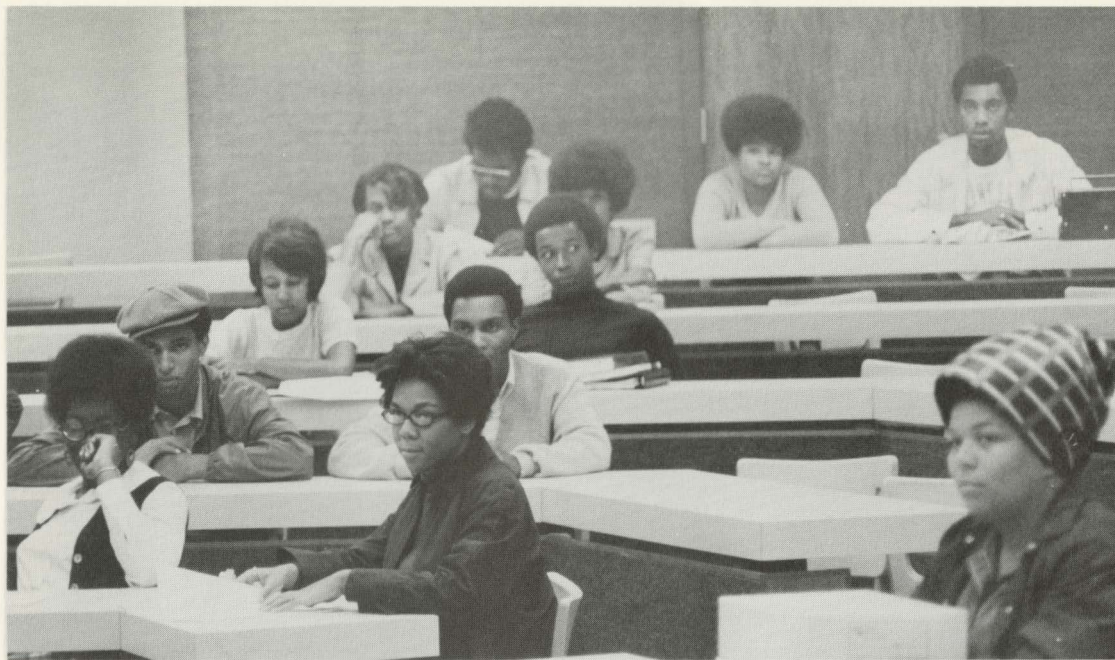
Here it is in figures:

Freshman:	3 quarters at \$750	=	\$2,250
Sophomore and Junior:	6 quarters at \$300	=	\$1,800
Senior:	3 quarters at \$500	=	\$1,500
			<u>\$5,550</u>

This is in addition to earnings from periods of co-op employment.

Based on eight work periods, the student should earn about \$12,000 (gross), bringing the total financial assistance to about \$17,550 over the five-year period.

A special Co-op Engineering Counselor will be available to counsel students participating in this scholarship program, and will work closely with each student to insure optimum benefit from the program.



"It takes special education and training to qualify for many positions in our highly complex industrial society."

TELL ME ABOUT COOPERATIVE ENGINEERING EDUCATION (CO-OP PROGRAM)

Our five-year Cooperative Engineering Program is one means by which the College of Engineering offers its undergraduate students a superior education, including the opportunity to undertake the obligations and responsibilities of professional employment.

Defined briefly, cooperative education permits students to schedule within their normal academic curricula a number of regular cycles—in this program, eight—of full-time industrial employment assignments which are related to the student's field of study. These periods of work alternate with periods of full-time study, based on the quarter system. The main advantage of this program is that students are introduced concurrently to the worlds of work and academic instruction, yielding a broader and richer preparation for postgraduate employment and responsibilities than can be provided by conventional academic programs.

In 1926, the UTK College of Engineering became the seventeenth educational institution to adopt the cooperative method of education, and as a leader in the co-op movement, the College takes pride in its co-op alumni holding prominent positions in industry and education. The chairman of the board of Aluminum Company of America, the director of the Reactor Development and Technology Division of the Atomic Energy Commission, and the Dean of Engineering here at UTK, were all co-op students. Even more important are the thousands of engineering students who have been helped to determine their career interests through co-op experiences. Some 500 students and about 100 industries and agencies have participated each year in the UTK Cooperative Engineering Program over the past few years.

"The only acceptable solution is to take bold, innovative, all-out action to increase the supply of minority engineering graduates not by a few percentage points, but ten- or fifteen-fold, and to get it done within a decade."



IS THERE ANY REAL DIFFERENCE BETWEEN CO-OP EXPERIENCE AND PART-TIME OR SUMMER WORK?

Yes, in most cases there are differences in both quality and quantity. "Working your way through school" by summer or part-time work usually means being productive only for a short time, which usually means a minimum of training or new learning experiences. Often employment is totally unrelated to one's field of study. Co-op is part of the educational process—education through participation. By alternating school and work quarters, the student correlates his education and practical experience toward a clearly defined career goal.

WHAT KIND OF WORK DO CO-OPS PERFORM?

Work assignments depend upon the student's field of study and the employer's need at a given time. Generally, students in the first- or second-year work periods are assigned to some form of clerical, laboratory, maintenance, drafting, or surveying work. As he progresses to the middle periods of the program, the student usually assists a graduate engineer or works as a member of an engineering group. The seventh and eighth work periods often find the co-op student functioning as a junior engineer.



"There is one circumstance that should play a large role in our thinking. And that is the anticipated shortage of engineers in the late 1970's."

EXPLAIN THE WORK SCHEDULE I WOULD FOLLOW IN THIS PROGRAM

The work-study schedule for students in this program is given below. Students are divided into two groups so that a student is always available for the industrial position.

		Summer	Fall	Winter	Spring
Year 1	A Group	Pre-Co-op Work	School	School	Work
	B Group	Pre-Co-op Work	School	School	School
Year 2	A Group	School	Work	School	Work
	B Group	Work	School	Work	School
Year 3	A Group	School	Work	School	Work
	B Group	Work	School	Work	School
Year 4	A Group	School	Work	School	Work
	B Group	Work	School	Work	School
Year 5	A Group	School	School	School	School
	B Group	Work	School	School	School

"To put the challenge bluntly, unless we can start producing not 400, but 4,000 to 6,000 minority engineers a year within the decade, industry will not be able to achieve its goals of equality, and the nation is going to face social problems of unmanageable dimensions."



HOW MUCH ARE CO-OP STUDENTS PAID?

Pay scales vary considerably from one employer to another, as do fringe benefits. At present the median rate for a first work period student is between \$2.25 and \$2.50 per hour, with average increases of fifteen to twenty cents per hour each work period.

OK, I'M INTERESTED. WHERE CAN I GET ADDITIONAL INFORMATION?

Your guidance counselor may be able to help you obtain additional information about The University of Tennessee and the College of Engineering, and may have the application for admission as well as our General Catalog. An excellent way to find out more is to visit the College of Engineering and talk with us about this scholarship program and about the various areas of engineering study offered here. It is not necessary to make an appointment; however, if you have a particular time in mind to visit the campus, please contact Dean Buford Smith at (615) 974-2454 and arrange an appointment.

We will be happy to send additional literature about the College of Engineering.

HOW DO I APPLY?

Simply answer the questions on the enclosed pre-addressed postage-paid card and drop it in the mail. You will be contacted promptly and given full details.

"Listen to the words of Dr. Kenneth B. Clark, distinguished Professor of Psychology and a member of the New York Board of Regents. Highly regarded as a black spokesman, Dr. Clark had this to say about industry standards of performance:

'I cannot express vehemently enough my abhorrence of sentimentalistic, seemingly compassionate programs of employment of Negroes which employ them on Jim Crow double standards or special standards for the Negro which are lower than those for whites. I think this is a perpetuation of racism, is interpreted by the Negro as condescension, and, as I told a group of psychologists and industrial leaders yesterday, will be exploited but will not contribute to any substantive, serious, non-racial integration of minorities into the productive economy of business.'

Industry must maintain high standards of performance for all persons."

Name _____

Address _____

City _____ State _____ Zip _____

Home Phone _____ Area Code (_____) _____

High School _____

Anticipated Date of Graduation _____

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