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New Program Leading to Engineering Master's Degree

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DAYTON, Ohio, September 27, 1971 --- What's that? You think engineering is a really dry subject? That it's just concerned with bridges, buildings and other impersonal things?

Think again! The University of Dayton's Research Institute has developed a new program leading to a Master's degree in Engineering. Labeled "the graduate program on Materials Science in Engineering," this program cuts across department and school lines, adding an interdisciplinary flavor to its scope. The College of Arts and Sciences, the Research Institute, and the School of Engineering are all involved in the new program.

Developed by Dr. Howard K. Smith and Dr. Alden Ray, who is director of the program, it's main purpose is to familiarize scientists and engineers with the development of materials for research in the field of Metallurgy. But it also will have applications in medicine through ceramic materials. According to Dr. Ray, the demand for such a program is great in the Dayton area. Not only is the program designed for young graduates in engineering, but it has also attracted personnel in Dayton's top industries and Wright Patterson Air Force Base, giving them additional up-to-date training in their field.

The idea for such a program was conceived in 1961 and was finally realized this year after the Kettering Engineering & Research Laboratories made the dream possible. Actually, it is the first academic program spawned in the new building, which houses the School of Engineering and the Research Institute.

The program revolves around metals, glass, ceramics, plastics, polymers, and composite materials. It allows its students to study existing materials, and, more importantly, to research and develop new materials. This new research will greatly effect our society in the future. New materials are being developed in engineering and industry, in science, and in the area of mass transportation. Already, the program has developed a new magnetic metal that will allow trains to increase their speeds, elevated on a thin stream of air, above the tracks.

The medical field will also benefit from this program. A major function of the research will be to develop new ceramics for organs for transplants. A new ceramic material for bone transplants has already been discovered within UD's research program and worked successfully for monkeys.

New materials for electric motors, frictionless bearings, telephones, and radio and television equipment will be researched.

The courses in this new Master's program are held in the evening and on Saturdays so that metallurgists from the Dayton community may attend. The program has a lab chief from Wright Patterson; engineers from Delco, Frigidaire, Inland, and Armco; and Air Force lieutenant; UD graduates in physics, chemistry, mechanical engineering, and electrical engineering; and staff members of the Research Institute enrolled in its courses.