New Way To Teach Physics Explained

MIT is spearheading a drive to evolve a new pattern for teaching modern physics. Dr. Nathaniel H. Frank, former head of the Department of Physics and a member of the Penhemen-Friedman-Friedman Foundation Science Study Committee was on the scene behind the new approach. Speaking at the 129th annual meeting of the American Association for the Advancement of Science December 29, Prof. Frank made these points:

1. Any really significant change in teaching college physics must be closely geared to the new physics of the 20th century.
2. Research in modernization of college physics teaching must be on the same large scale as the most advanced research into contemporary physics itself.
3. Any significant change in the structure of teaching physics must break entirely from traditional history.

Friedman emphasized that the new physics, based on quantum physics, relativity, and modern statistical physics, constitutes a model evolution even greater than that of Newtonian physics.

He pointed out that many problems in the new Physics cannot even be expressed in the terminology of traditional physics.

The Teaching Center, which was established in 1960 under the directorship of the late Dr. Francis L. Friedman, Professor of Physics who died last August, has placed heavy emphasis on giving students a thorough understanding of the experimental evidence on which modern physics is based. In line with this emphasis, the Center has been recording film demonstrations of experiments that are too expensive or complex to be brought into the student laboratory.

Further, Friedman pointed out that many problems in the new Physics cannot even be expressed in the terminology of traditional physics.

Friedman's major research in cosmic ray shower theory was concerned with the interaction of high energy particles in the atmosphere. He also made important contributions to the theory of "stripping reactions," an important nuclear process involving the separation of neutrons from tritium nuclei.

Friedman lectured at MIT, the age of 41, played a leading role in the establishment of MIT's Science Teaching Center and was its first director. He was also the chief scientist of the Physical Science Study Committee.

A grant of $100,000 from the Oppenheimer-Friedman Foundation of New York City to MIT will be used to establish a lectureship in memory of the late Francis L. Friedman, professor of physics at MIT.

The lectureship, named the Franken-Friedman Lectureship in Physics, will permit distinguished physicists from the United States and abroad to offer lectures at MIT.

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