

## State approves new master's degree program in Biomedical Materials Engineering Science

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ALFRED - The State Education Department has approved a new master's degree program in biomedical materials engineering science (BMES) to be offered by Alfred University. "We're delighted with the state approval to offer this new degree," said Dr. Ronald Gordon, dean of the School of Ceramic Engineering and Science. "This new degree program builds upon Alfred University's traditional strength in ceramic engineering and materials science, and its growing strength in the life sciences," he said. The School of Ceramic Engineering and Materials Science offers a concentration in biomedical materials engineering in its undergraduate program, and will receive funding through the State University of New York over the next two years to allow it to develop a Ph.D. program in materials science, with emphases on biomaterials and photonics, said Gordon. Earlier, the University received a nearly \$1 million grant from The Whitaker Foundation to also assist in the development of a doctoral-level program in biomaterials engineering science by hiring new faculty and providing start-up research funding. The School of Ceramic Engineering and Science already has a track record in biomaterials research, noted Gordon. It is home to a satellite of the National Science Foundation's Industry-University Center for Biosurfaces. Alfred's specialty has been in exploring the reactions that occur when materials come in contact with living systems, said Dr. Alan Goldstein, who has been appointed director of the BMES program. Goldstein holds appointments as professor of biomaterials in the School of Ceramic Engineering and Materials Science, as well as the Fierer Chair in Molecular Cell Biology. For years, Goldstein explained, researchers assumed that some materials, including ceramics and glass, were inert in the human body, when, in fact, a series of reciprocal complex reactions were occurring on the surface, both at the surface of the material and in the cells and tissues in contact with the material. Better understanding those reactions and the factors that control them will allow engineers and scientists to design improved materials for current applications such as implanted medical devices, artificial organs and bones. "More important, biomedical materials are the key 'enabling' technology that provides the foundation for a whole array of bioengineering applications, covering everything from implants for optimized drug delivery to actual tissue engineering," said Goldstein. "We are moving from the age of 'inert' biomaterials into an era of 'bioreactive' materials. Alfred's unique capabilities in glasses and ceramics are creating or discovering new potential biomaterials applications every day." With the approval of the new Master of Science degree in biomedical materials science, the School of Ceramic Engineering and Materials Science dramatically expands the range of its degree program, while retaining its strong, traditional foundation that include B.S. and M.S. degrees in ceramic engineering, glass science and materials science, and Ph.D. degrees in ceramic engineering and glass science. Alfred University is the only institution in the United States to offer a doctoral program in glass science, and is only the third in the world to do so. The ceramic engineering and glass science programs offered by the School of Ceramic Engineering and Materials Science are the top-rated in the United States by The Gourman Report, which ranks them higher than those at much larger institutions like Penn State, the University of Illinois, Rutgers and Clemson, noted Gordon. #####