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Graduate Physics Education Adding Industrial Culture and Methods to a Traditional Graduate Physics Department KEN VICKERS, University of Arkansas, GREG SALAMO, RON FOSTER, RONNA TURNER — The education and training of the workforce needed to assure global competitiveness of American industry in high technology areas, along with the proper role of various disciplines in that educational process, is currently being re-examined. Several academic areas in science and engineering have reported results from such studies that revealed several broad themes of educational need that span and cross the boundaries of science and engineering. They included greater attention to and the development of team-building skills, personal or interactive skills, creative ability, and a business or entrepreneurial where-with-all. We will report in this paper the results of a fall 2000 Department of Education FIPSE grant to implement changes in its graduate physics program to address these issues. The proposal goal was to produce next-generation physics graduate students that are trained to evaluate and overcome complex technical problems by their participation in courses emphasizing the commercialization of technology research. To produce next-generation physics graduates who have learned to work with their student colleagues for their mutual success in an industrial-like group setting. And finally, to produce graduates who can lead interdisciplinary groups in solving complex problems in their career field.

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