

MAR08-2007-004303

Abstract for an Invited Paper
for the MAR08 Meeting of
the American Physical Society

An Interdisciplinary Program in Materials Science at James Madison University.

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Over the past decade a core group of faculty at James Madison University has created an interdisciplinary program in materials science that provides our students with unique courses and research experiences that augment the existing, high-quality majors in physics and astronomy, chemistry and biochemistry, geology and environmental science, mathematics and statistics, and integrated science and technology. The university started this program by creating a Center for Materials Science whose budget is directly allocated by the provost. This source of funds acts as seed money for research, support for students, and a motivating factor for each of the academic units to support the participation of their faculty in the program. Courses were created at the introductory and intermediate level that are cross-listed by the departments to encourage students to enroll in them as electives toward their majors. Furthermore, the students are encouraged to participate in undergraduate research in materials since this is the most fundamental unifying theme across the disciplines. This talk will cover some of the curricular innovations that went into the design of the program to make it successful, examples of faculty and student research and how that feeds back into the classroom, and success stories of the interactions that have developed between departments because of this program. Student outcomes and future plans to improve the program will also be discussed.