Student Last and First Name:
Program, Course or Contract Title: Physical Systems
Quarter and Academic Year: Winter 2007

DESCRIPTION: We studied Electromagnetism, Vector Calculus, and Modern Physics; read and discussed articles on modern physics and books on women in physics; and did research planning workshops. We worked through Ch.1-5 of Introduction to Electrodynamics by Griffiths (3rd Ed.), and Ch.1-7 of Modern Physics by Tipler and Llewellyn (4th Ed.). We seminared on articles from *Physics Today* and *Science News*, and chapters from Women in Mathematics (Osen, 1974, MIT), and Out of the Shadows: Contributions of twentieth-century women to physics (Byers and Williams, 2006, Cambridge). Students had two homework assignments per week, and in-class midterm and final exams. Teamwork was strongly encouraged in physics and required in seminar.

Students planned research projects in winter quarter, to be carried out in spring. Students were encouraged to develop unique open research questions, articulate multiple hypotheses, and design and carry out tests of their hypotheses to address their questions. We began the program by attending the joint American Astronomical Society / American Association of Physics Teachers meeting in Seattle in January, and concluded with students presenting their research at the American Physical Society NW section meeting in Pocatello (and Evergreen's Science Carnival) in May.

Details about Physical Systems at Evergreen are available online.

Faculty: Dr. E.J. Zita

EVALUATION: Written by: E.J. Zita, Ph.D. (physics)

EQUIVALENCIES: **TOTAL CREDITS EARNED:**
4 Intermediate Electromagnetism
2 Vector Calculus
4 Modern Physics
3 Research
3 Seminar: readings in modern physics and cosmology, biographies of women in physics and math