

**COLLEGE OF ENGINEERING
Civil Engineering**

**SUMMER RESEARCH OPPORTUNITIES
FOR UNDERGRADUATE WOMEN**

APPLICATION DEADLINE: MARCH 1, 2005

The Department of Civil Engineering is pleased to offer the following research project for the summer of 2005. Interested students are urged to contact the faculty member(s) directing the project that most interests them. By contacting the faculty member, you can discover more about the project, learn what your responsibilities will be and if possible, develop a timetable for the twelve-week research period.

Improving the Performance of Water Reclamation for New York City

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As the result of a consent decree, the City of New York anticipates spending more than twenty billion dollars in the next twenty-five years for upgrades to more than a dozen water reclamation plants operated by the City. One of the major goals of these improvements is to significantly reduce the discharge of total nitrogen to sensitive aquatic ecosystems to prevent eutrophication and improve water quality. In the Department of Civil and Environmental Engineering, Dr. Dan Oerther works with a group of undergraduate and graduate students to identify and test alternative bioreactor systems to remove nitrogen from reclaimed wastewater mimicking conditions similar to those currently under study by the City of New York. As part of this project, participants would operate bioreactors, perform chemical and physical tests of bioreactor samples, and assist with molecular biology-based characterization of the microorganisms responsible for nitrogen removal. Students with a strong interest in Environmental Biotechnology and the protection of human health and the environment are encouraged to apply.