

**CEEN 189 Civil Engineering Design
SPRING 2008**

Guidelines for Poster Presentations and Abstracts

**Word file abstract of Project due by March 31, 2008
PowerPoint file of Poster due by April 4, 2008**

**Posters displayed: Sunday, April 13, Haggerty Engineering
(specific location to be determined)**

1. **Audience:** Your posters and abstracts should be designed for an audience consisting of both technical and non-technical viewers:

Non-Technical: Viewers with little or no technical background should be able to understand the purpose of your project and how your final design solves the problem.

Technical: Viewers with a technical background should be able to understand your final design and be convinced that it solves the problem at a reasonable cost.
2. **Presentation:** Be prepared to use your poster presentation to briefly explain the work described and to answer specific questions from the viewers. You may want to bring along blank paper to assist in discussing the technical details relating to your poster. You are encouraged to have prototypes or other visual aids available for discussions with viewers.
3. **Size:** One 40" x 60" foam board and one easel will be provided to each team. Each team will mount their posters onto their foam board which will then be placed onto their easel for viewing.
4. **Poster Production:** Teams will provide the Discovery Learning Center with a PowerPoint file of their poster no later than April 4. The file should be sent via e-mail to dlc@mu.edu.
5. **Format of Poster:** Refer to handouts from texts on technical and scientific poster presentations. Posters must be readable from a distance of 1 to 2 meters.
6. **Set-Up of Poster:** Teams should arrive early to allow time to mount posters onto the foam boards. Easels and boards will be labeled with team numbers.
7. **Abstract of Project:** Submit a one page Word document (via e-mail to jay.goldberg@mu.edu) briefly describing your project by March 31, 2008. Follow the format presented in the attached example.

Example of Project Abstract:

XEROSTOMIA SLEEP AID

Project Team: Christopher Herskovits
Matthew Meyer
Carla Thompson
Maggie Vander Heiden

Faculty Advisor: Dr. Jay Goldberg

Sponsor: Col. Howard Roberts D.D.S.
Navy Institute for Dental and
Biomedical Research

Dry mouth (xerostomia) is an abnormal reduction in saliva production and can be the result of diseases of the salivary glands, radiation therapy of the head and neck, adverse medication effects, and chemotherapy. Dry mouth can affect mouth comfort, oral health, chewing ability, swallowing, speaking, and overall quality of life. Currently patients can chew sugar-free gum, use saliva substitutes, sip water regularly, use medications, or change dietary habits to manage xerostomia symptoms. Unfortunately, these solutions only produce temporary relief, require patient interaction, and may have associated side effects.

The purpose of this project was to provide a passive form of oral hydration for xerostomia patients during sleep. The device was required to function passively, simulate normal salivary function, and provide overall oral comfort. The Xerostomia Sleep Aid contains three components: a water reservoir, an IV pump, and an interface. The use of an IV pump allows for water to be released at a physiological flow rate into the patient's mouth without requiring human interaction. Hydrating a xerostomia patient's mouth relieves the dryness, irritation, and discomfort associated with this condition.

Testing to verify the design indicated that the device provided the desired physiologic flow rate of 0.1ml/min, while improving a patient's oral comfort and quality of sleep. The device was able to be formed into the position that is most comfortable to the patient. Patient studies have not been conducted but will be required for commercialization of the device.