

Engineering Student Technology Committee

<http://www.engr.colostate.edu/ESTC>

College of Engineering

1. Title of Proposal: Constant temperature baths for the CBE undergraduate laboratories

2. Proposal Participants:

Primary Contact for Proposal

Name: Brad Reisfeld _____ E-Mail: brad.reisfeld@colostate.edu _____

Department/Major: Chemical and Biological Engineering _____

Check One: **Faculty** **Staff** **Student**

Additional proposal participants

Name: Tracy Perkins _____ E-Mail: tperkins@engr.colostate.edu _____

Department/Major: Chemical and Biological Engineering _____

Check One: **Faculty** **Staff** **Student**

Additional proposal participants

Name: Tim Gonzales _____ E-Mail: tim@engr.colostate.edu _____

Department/Major: Chemical and Biological Engineering _____

Check One: **Faculty** **Staff** **Student**

3. Proposal Abstract (limit to 100 words):

Equipment and analytical instrumentation in the CBE laboratories is barely adequate to support the needs of the current number of students in the CBE and CBE/BME programs. With dramatically increasing enrollments, these programs are in danger of losing the capacity to offer meaningful lab experiences for their students. One of the urgent needs is for constant-temperature baths, which are used heavily by students in CBE lab classes and in senior design projects. Based on this critical need, the CBE Department requests that the ESTC provide funds to purchase two constant-temperature baths for use in relevant courses and student educational activities.

4. Proposal Budget

List of items to purchase and cost of each

Two (2) constant temperature baths:

The current retail cost of the instruments is about \$6,500 or \$13,000 for the pair.

Dollar or percentage amount requested from ESTC: 100%

5. Full description of proposal:

The CBE undergraduate laboratories are underequipped with supplies and equipment to serve the increasing number of students in both the CBE and CBE/BME programs. Though the list of required equipment is long, there is a need for additional constant-temperature baths, which are used by students in CBE lab courses for a variety of experiments and some senior design projects.

The CBE labs currently house two constant temperature baths, which were adequate years ago when enrollments were much less than they are currently. The upshot is that this equipment shortage substantially limits the scope of certain experiments and the number of students who can use the equipment. These constraints significantly reduce the amount and quality of data gathered and adversely effects students' laboratory experiences.

To alleviate this problem and help continue to provide a meaningful lab experience for undergraduate students, the CBE Department requests that the ESTC provide funding to purchase two additional constant-temperature baths to be housed in the Scott Bioengineering Building unit operations laboratory.