

Electrical and Computer Engineering

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April 30, 2009

Dear Brad Reichel,
Chair, ESTC,

I am writing to you to request the use of the CTF fund for interdisciplinary programs to purchase a potentiostat for instructional purposes within the College of Engineering. I am a core faculty member of the college's biomedical engineering program. There are a number of faculty members in the biomedical engineering program who are involved in instructional activities in biosensing. For example, Dr. Kevin Lear in the Electrical and Computer Engineering Department teaches a biosensor course within the college. He collaborates extensively with faculty members, such as Dr. David Dandy, in the Department of Chemical and Biological Engineering. I have been involved in instructional activities involving senior design projects in silicon based biosensors. I am currently collaborating extensively with faculty members in the Department of Chemistry (Dr. Chuck Henry) and in the Department of Biomedical Sciences (Dr. Stuart Tobet). Both Dr. Henry and Dr. Tobet are core members of the college's biomedical engineering program. I am sure there are other instructional activities and collaborations within the biomedical engineering program that I am not aware of.

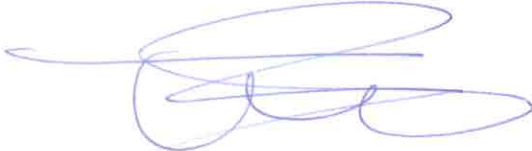
One of the key equipment that is required for teaching bio-sensors is potentiostat which is used for measuring the existence of chemical compounds and their strength. The reason for requesting the CTF fund for purchasing a potentiostat is three-fold:

1. Since the biomedical engineering program within the college is relatively new, particularly in the area of biosensing, we really have not been able to acquire necessary equipment needed for our basic instructional programs. In my case, every time when I need a potentiostat for senior design projects, I need to borrow one from the Department of Chemistry. This has severely limited the schedule and the effectiveness of students to do their work.
2. The potentiostat purchased using the CTF fund can be shared by other faculty members and students within the college who are also engaged in similar biosensing related instructional activities. This equipment will benefit many highly interdisciplinary programs and activities within the college.
3. The immediate benefits of having a potentiostat are undergraduate senior students doing senior designs. Since the biomedical engineering program within the college is relatively new, we are expecting the number of students using it to be in the range of 10-20. Furthermore, the very interdisciplinary nature of the instruction and research activities using this equipment dictates a relatively smaller population of students who may benefit from it, compared to the student populations for traditional and more established areas within the college. However, the availability of such crucial equipment will enable further development and maturing of our biomedical

engineering program. It provides a good potential for longer term benefits for the college.

The potentiostat we are interested in buying is a four-channel potentiostat with a pico-booster from eDAQ (model EA164 QuadStat). The rough cost is estimated at \$14,000. I hope your committee will support my request. If you have any questions regarding this request, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, consisting of several overlapping loops and a long horizontal stroke extending to the left.

Tom Chen
Professor,
Department of Electrical and Computer Engineering, and
School of Biomedical Engineering

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Dear Dr. Chen

Subject: Response to Request for Interdisciplinary Funding

The Engineering Student Technology Committee (ESTC) considered several requests for interdepartmental funding at our meeting on May 8. I am pleased to report that the committee approved your request for the eDAQ potentiostat for up to \$14,000.

During our discussion, the committee expressed concern that this equipment be made available to all students. You indicated that would be the case. The committee would like to hear from you as to how you plan to make this instrument available to all students so that those interested will be aware of the resource.

Please coordinate the purchase of the potentiostat with the Engineering Business Office and charge account 259130-3605. If possible, the equipment should be purchased during the current fiscal year, but no later than the end of fiscal year 2010.

Sincerely

A handwritten signature in blue ink, appearing to read 'BR', is placed on a light blue rectangular background.

Brad Reichel
Engineering Student Technology Committee Chair