

February 26, 2013

Dear Sen. Beth Bye and Distinguished Legislators of the Higher Education Committee

Ref: : Higher Education and Employment Advancement Committee

PUBLIC HEARING AGENDA, Thursday, February 28, 2013 1:00 P.M.

S.B. No. 844 AN ACT IMPLEMENTING THE BUDGET RECOMMENDATIONS OF THE GOVERNOR CONCERNING HIGHER EDUCATION. (HED)

We are four faculty members from the Physics-Earth Sciences Department at Central Connecticut State University. Unfortunately we are unable to attend the hearing you have scheduled because of conflicts with our teaching schedule at Central Connecticut State University.

In specific reference to the Governor's Budget recommendations and SB No. 844, we would like to offer the following statement. We are seriously affected by years of neglect for a core science program at CCSU, Physics. The Governor's STEM initiative for Connecticut must include the State Universities and not just the University of Connecticut. We are troubled by the lop-sided nature of his support and ask for you to include us in the package. The STEM initiatives require a strengthening of Physics as a core science, not its destruction. Students attending CCSU are primarily from within the State and work to improve the economy of the State after graduation. They still find it affordable to attend and get an education in the sciences, engineering, technologies and mathematics that are as good as at the University of Connecticut. They should not be discriminated against or made to feel inferior.

The physics program at CCSU has been attached to a broader department of Physics & Earth Sciences from the very beginning. In fact it also incorporates Science Education (which offers courses that are specific to the requirements of our Teacher Education students who are interested in teaching science at the K-12 levels). This tie-up is unique to CCSU and does not exist anywhere else. Over the years, the Physics program has suffered through a reduction in faculty (through retirement and transfer) and these positions were not subsequently filled with new recruits. Over the years, our group has shrunk from **seven** members to **four**, at a time when we have been working hard to offer a full-fledged Physics program that not only majors students in Physics but also offers introductory-level Physics to a wide spectrum of other disciplines on our campus that range from General Education to Physical and Science Education, from Earth Sciences, Biology and Chemistry to Engineering and Technology. Without overstatement, one can say that Physics is a critical and essential part of many programs at CCSU and its impact is felt by every school at our University.

Despite its essential character, we are faced with diminishing institutional respect and support. The main argument held against us is that there are, relatively, a "small" number of students who major in Physics. This means that our upper-level courses typically have less than 10 students

enrolled and so do not qualify for full load-credit to the instructor. In the effort to provide the many needed sections of introductory-level courses by a small number of full-time faculty in Physics we have to offer these courses that are over-subscribed and larger than they should be by standards of good teaching. This particularly affects our laboratories which become overcrowded because we are asked to accommodate the increased number of students without paying heed to sound academic practice. It might even compromise safety. This is very deleterious to the interests and mission of the University and the State of Connecticut's STEM initiatives as well as hopes for economic recovery and advancement.. We have been informed very recently by our administration that the budget for adjunct teachers will be further reduced in the next semester and we will not be allowed to teach any course that has an enrollment less than nine students (which would seriously jeopardize the offering of upper-level Physics courses in our program, thereby affecting the graduation schedule of our students). The overall effect would be to erode Physics at the University and make it into a service program that only addresses introductory-level courses, thus making it no different than what is offered at community colleges. Of course, concomitantly, the programs that require Physics would be affected as well, if not by way of the absence of specific courses taught, definitely by way of perception of the University. It could also seriously affect future accreditation efforts. And all through the past two years, we have been asked to cede precious laboratory space that is required for servicing Physics courses because of an incorrect understanding of the needs of Physics.

We have met with our leaders in administration on our campus to try to convince them of the need to help us and support our initiatives. Unfortunately this has been to no avail. When a faculty member from Physics retired two years ago, we were told to proceed with recruitment efforts for a full-time replacement (that would ameliorate some of our problems) only to have the search peremptorily stopped in mid-stream because the "line" was transferred to another department by the administration. There was no consultation with us whatsoever and when we sought an explanation we were informed that there were greater needs elsewhere and we had few majors to justify the request at this time. Last Fall we were again given the go-ahead to recruit a full-time faculty in Physics. This was made possible through the Board of Regents. Our understanding was that the Governor's STEM initiative, the needs of our growing Engineering program and the desperate need of Physics for at least one full-time faculty, were all factors that led to this outcome. We advertised in Physics and Education publications and had received about 80 applications as of last week. A few days ago, we were again informed by administration that this search had also been "frozen". No reasons were offered. Like the previous time, we will have spent much money and time in this effort for nothing. Besides, we will once again have to inform each of the applicants that the position they applied for has been cancelled. The consequences of this will redound to the negative image of our University nation-wide.

We need to recruit full-time faculty members to fulfill faithfully the Physics program at CCSU. When one of our faculty members retired last year, we were promised his position and were asked to proceed with a search for his replacement. After receiving several applications, we were told in January 2012, quite casually and without consultation, that the position was no longer available to us and we would have to stop the search immediately. The basis for this decision was apparently the greater needs elsewhere and the budget situation. This is "penny-wise and pound-foolish". Choosing "easy" majors and courses with large enrollments, at the expense of a

critical program such as Physics, will hardly secure the future of education, research and manufacturing in our State. Higher education institutions need to be torch bearers not crowd pleasers.

We have also asked to form ourselves into a separate department to give the Physics faculty the autonomy needed so that we can focus on making Physics better and of greater interest to our students in school and college. The perception of Physics as a “difficult” area of study is widespread. Not all of it is without reason. But the essential character of this natural science makes its study crucial not only to all the other sciences but also to engineering and technology. At some level, it must be part of every educated and critical citizen’s knowledge who is required to make important decisions that ultimately will decide our future and survival on this planet. To improve interest and enrollment in our program, during the last academic year, we made plans to initiate an aggressive recruitment effort from high school seniors in the school districts in and around New Britain. Even with our small faculty number, we have involved students in research and maintained their interest in developments in physics, and brought in significant amounts external funding for equipment, research and teaching. We are actively investigating structural changes through inter-disciplinary programs with other departments such as Biology, Bio-molecular Sciences, Chemistry and Biochemistry and Engineering.

An economy that wishes to rebound in industry and research requires graduates who have a good knowledge of Physics with appropriate mathematical rigor. A sound and full-fledged Physics program is also essential to maintaining the viability and credibility of our Engineering, Technology, Biology, Chemistry and Education degrees. Studying Physics provides preparation for a variety of careers in industry, research and education.

We feel that investing in this core science is required now to seed the technology of the future. Industry needs problem solvers and a Physics major has this background. At the very least, we seek your intervention in “unfreezing” the Physics search that has been stopped as of now.

Looking forward to hearing from you and getting your support in this vital endeavor,

Sincerely

Peter LeMaire
Sadanand Nanjundiah
Luis Tongson
Nimmi Sharma