NRES RESPONSE TO TIER 3 QUESTIONS

a. How can the teacher-scholar model and collaborative research and partnerships help Cal Poly both anticipate future needs and develop innovative responses (in your discipline)?

I don’t see how you can anticipate future needs and develop innovative responses without being engaged in scholarship, whether pedagogical or scientific research. Current publication requirements and financial incentives to propose and receive research grants and contracts compels faculty to keep abreast of current problems in the public and private sector. Results from this work inform the scientific community on future research needs.

b. Teaching and Learning. (1) What effective approaches to teaching and learning are emerging in your field and related interdisciplinary areas? (2) What learning environments should Cal Poly develop or modify to accommodate new modes of teaching and learning in the future? Please respond in terms of the kinds of teaching and learning spaces that are critical to your discipline for both (a) formal, scheduled or organized instruction, and (b) informal learning outside the classroom or laboratory.

(1) More on-line resources and apps that reinforce class room and field laboratories.

(2) Personal computing device “plug-in” labs and facilities where students can download software related to class subject matter. We cannot afford to continue the practice of equipping computer labs.

Most critical to our environmental science programs is institutional support for laboratories requiring vehicular travel. Legal liability is increasingly constraining our ability to deliver our programs.

c. Learn by Doing. (1) How should Learn by Doing incorporate new learning needs, opportunities and technologies (in your field and related interdisciplinary areas), and (2) what are the facilities implications for both (a) formal instruction and (b) informal learning?

(1) I don’t think anything new is needed. What is most critical is to address the massive backlog in deferred maintenance of our existing facilities. Even the new Bldg. 180 has significant design and operational flaws that need correction. Other than that, anything new I addressed in item b.

(2) I understand the current master plan calls for the expansion of the Library. Given how that the Library has been so significantly modified to adapt to the new informational management systems, rather than a depository of molding paper, I don’t see much need for the expansion. Beyond that, replacement of the remainder of the old Bldg. 52 should proceed ASAP with more teaching and research lab spaces. Most importantly, more large lecture halls (>75 seats) are needed given the push for greater throughput, efficiency, and diminished commitment to Learn-by-Doing.

d. What should the leading comprehensive polytechnic university of the future be like?

It should be an institution that focuses on our polytechnic programs. We need to eschew the idea that we should try to be all things to all prospective students. There are countless universities that offer programs in English, political science, history, business, math, physics, etc. There are not many that have our reputation in engineering, architecture, and agriculture/natural resource sciences. We need to focus on the programs that distinguish us from your typical CSU campus or research-oriented universities. We can’t afford to allocate increasingly scarce educational funds evenly across all of our current programs. We need to focus on our strengths!
Finally, the future Cal Poly should have a much smaller administration, diverting much of those resources to restoring growth in faculty numbers. The strength and reputation of any university is built upon its faculty and students, not its administration. Similarly, far too many resources have been directed toward advising than teaching. Our advising structure and organization is wasteful, overlapping, and ineffective. The Mustang Success Center is a particular waste of money. Do away with it and direct those resources to college and/or departmental advising and teaching functions.