

From: Kenton Rodgers
Sent: Monday, December 08, 2014 10:06 PM
To: Larry Peterson
Cc: Bernhardt Saini-Eidukat; Donald Schwert; Seth Rasmussen
Subject: CULE recommendations

Good evening Larry:

I just saw what appears to be the most recent proposed list of General Education requirements (NDSU Quest?). I am writing out of concern for (a) what appears to be a diminution of the requirements for natural and physical sciences to only three credits and (b) the complete absence of a laboratory science requirement.

Why am I concerned about these aspects of the proposal?

1. Based on my experience, our non-science students seem to have a superficial appreciation for the past, current and future roles of science and technology in the quality of the human condition. This makes it difficult, if not nearly impossible, for some to recognize that basic, general knowledge and appreciation for science is a growing cornerstone of strong domestic and global citizenship. In my view, to attenuate exposure of our students to the sciences is to imply (or perhaps even reinforce) that the sciences are not important to them or their future. I hope we can avoid sending that message.
2. I appreciate that laboratory experiences are expensive and, by necessity, somewhat "cookbook." Indeed, the cookbook nature of undergraduate experiments is often used as an excuse to omit them from the curriculum. But scientific inquiry, by its nature, has some cookbook character. The research community develops tools and methodologies to study the natural world and then applies them through scientific inquiry to deepen our understanding of natural phenomena and their history. Critical to most experimentation are observation, measurement and reproducibility (i.e. precision). A full appreciation for those pillars of experimental science can really only come through a laboratory experience. If our academy really believes, as we so often say, that we're preparing the leaders of tomorrow's society, it is incumbent on us to prepare them for meaningful and productive participation in meeting the societal challenges of their time. I simply cannot imagine that being possible without exposure to both fundamental and practical aspects of science. I hope the CULE Committee will reconsider eliminating the laboratory experience from its proposed undergraduate general education requirements.

I'd be happy to discuss this further at your convenience.

Respectfully,
Kenton Rodgers