

From: Jose Mendoza
Sent: Monday, March 20, 2017 3:26 PM
To: Elizabeth Ridder <eridder@csusm.edu>
Cc: Julie Jameson <jjameson@csusm.edu>
Subject: Re: Course proposal forms - impact to other disciplines review requested

Hi Elizabeth,

The department of chemistry has no objections to your proposed course and supports it as a GE BB course.

Jose

From: Michael Burin
Sent: Monday, March 27, 2017 3:09 PM
To: Elizabeth Ridder <eridder@csusm.edu>
Cc: Julie Jameson <jjameson@csusm.edu>
Subject: Re: Course proposal forms - impact to other disciplines review requested

Hi Liz,

This looks like a valuable addition to our curriculum at CSUSM and I am pleased to endorse it.

Note that most years I do a single lecture on climate change to a GE BB audience as part of Astronomy 342.

I offer the following advice from this experience; please consider it below, though nothing more is required.

* If you are going to use the term 'Anthropocene' I would expect some discussion of climate-change engineering ideas, e.g. intentional weather and albedo modification strategies, coastal terraforming, etc.

This is perhaps already what you intend in week 15.

* In discussing data and its correlations (week 10) the classic adage contrasting causation should be included (!)

While TV news cannot afford to dwell on subtleties that might deleteriously raise doubt, a deliberative classroom can.

Likewise, I would hope for coverage of both positive and negative feedback loops during week 5.

* The exercise on Earth's heat budget seems well laid out. I have found that covering anything mathematical in the GE BB classroom is often accompanied with significant student agony...but they should be able to follow this. Power

law relationships put more abstractly might be problematic though. Most students have seen the material before, at some

point, and just need friendly coaching (and sometimes extended office hours) to be reminded. E.g. when I discuss trigonometric ideas in astronomy I frame it in terms of triangles and the ratios that you can obtain with their sides – this goes over much easier than talking about sines and cosines! So, students can get more freaked out about math terms than math substance.

* Optimum solar panel positioning is handy in discussing modern uses of the solar angle. Also, Mars and Venus provide interesting contrasts and potential ‘nearby’ lessons in climate change.

* Lastly, note that Prof. Gerardo Dominguez (Physics) is a local expert on isotopes and their use in geophysics. Lately he has hosted in his lab a tree ring / climate expert from the Hydrologic Research Center in Del Mar, Dr. Rochelle Graham, who I imagine would be happy to come by your class sometime for a mini lecture on that topic if you are interested. <http://www.hrc-lab.org/index.php>

Best,
Michael

Michael J. Burin
Associate Professor and Chair, Physics
Science Hall 2, CSUSM; 760.750.8575
Sajith Jayasinghe

sjayasin@csusm.edu
<http://public.csusm.edu/jayasinghe>

Associate Professor of Chemistry and Biochemistry

ASC Faculty Liaison to the CSM (16-18)
Departmental Biochemistry Faculty Advisor
University Curriculum Committee, Chair 16/17

California State University
333 S. Twin Oaks Valley Road
SCI 2 - Rm 115
San Marcos, CA 92096