

Science Division Meeting Minutes
May 11, 2009
(send corrections to coahranm{at}grinnell.edu)

Center for Science and the Liberal Arts (Jim Swartz)

Jim gave an update on past and potential activities of the center.

In April, the center nominated the Grinnell Science Project for the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring (PAESMEM). The nomination described the work done by GSP, including but not limited to, the pre-orientation session that is held at the end of each summer.

The center is considering hosting an event to bring high school science teachers to Grinnell College to talk about the challenges they are facing, and what we might be able to do to help them. One benefit of this would be that it allows us to tell the story of science at Grinnell College more broadly.

Another idea is to bring people from other liberal arts institutions together to talk about best practices for serving populations that are traditionally under-represented in the sciences. There is a small amount of funding, both internal and external, that might be available for this effort.

Jim is very open to hearing ideas from all of us about ways to get the word out about science at Grinnell College and to pursue improvements in science education, both here and more broadly.

Science Literacy at Grinnell College (Clark Lindgren)

Clark is interested in exploring the question: How well are we providing science education to our students across the college, especially to students in non-science majors?

Scott Baumler in the Office of Institutional Research did some transcript analysis, looking at data from the past 10 years and found that 3% of students graduating from Grinnell have not taken a single science course, and 7% have not taken any science courses except mathematics. Is 7% low enough?

Clark would like to tease out the numbers in this data a bit better. For example, we could disaggregate the data based on division: humanities vs. social studies. We could also ask which science courses are the non-science students who do take science taking?

Mark Schneider: Another thing to look into – how many of these students tried to register for a science course, but could not? But that information may be hard to get after the fact.

Someone: In biology we do sometimes cut upper-year students from BIO150 to make room for lower-year students.

David Lopatto: This question came up previously in a college self-study, and the 3% were

interviewed. Some said they took their science in high school and were done. Others said, "You promised an open curriculum, and you can't make me take science."

Jim Swartz: Another question we could ask is, For students who may take just one science course, what is the information we would like them to learn?

Clark would like to hear from 2 or 3 people who are interested in doing further work on this. He would like to get a group together and get started over the summer.

Used textbook sales (Clark Lindgren)

Since he had been asked about it by early career faculty members, Clark looked into the issue of buyers who come to campus to purchase used textbooks, and he shared his findings with us.

First, it is not illegal to sell these books, even when they say Not For Resale. However, Grinnell College does have a no-solicitation policy, so we could tell the buyers to leave if we wanted to.

Nebraska booksellers, who come to campus to buy books from students at the end of term, will also buy professors' books, even if they weren't used in a course. If we choose to do that, the bookstore gets some benefit.

Sue Ferguson regularly packs up books to send to Africa or China. The project is through Phi Beta Kappa, and she would be happy to send our excess books as well.

Bob Cadmus: I give astronomy books to middle- and high-schools. Some students are underserved by science at these schools, and this is a way to get college level books into their hands.

The books could also go to the prison project.

Integration of Academics and Athletics (Elaine Marzluff, Gail Bonath, and Greg Wallace)

There will be a workshop this fall bringing together faculty from ACM schools to talk about ways that we can integrate athletics and academics better. Currently, most of the push for doing this is coming from college Deans. Elaine, Gail and Greg will be speaking to each of the Divisions seeking their ideas.

As an example, one idea is to have educational activities incorporated into athletic trips. Perhaps there are ways to bring the teams together for educational activities, such as doing readings, visiting museums in the host cities, etc.

Question: Are there examples of courses in this division that currently incorporate subject content or skills related to athletics?

TEC154 (Evolution of Technology) included reading papers on sports technology this year, and several students chose to write papers on sports technology.

Biochemistry talks about fitness – not about organized athletics, but if there are athletes in the class, they often ask great questions about this.

In organic chemistry we talk about steroids and take small steps toward synthesizing them.

In psychology we talk about whether visualization imagery is helpful.

Statistics courses have asked questions about stereotypes of how “jocks” and “library nerds” behave differently. Regardless of the data, students are very interested and invested in these stereotypes.

At this point, we left the prepared questions behind...

Diane Robertson: I consider athletics to be an extra-curricular activity, and I'm curious why athletics has been singled out for this over theatre, music, or other activities.

Elaine Marzluff: This is being driven by Deans and Presidents at certain schools. One possible answer would be for us to say we are happy with things the way they are.

John Stone: Similarly, there seems to be an assumption that this would be a good thing. What is the justification for this? Do athlete students feel they are treated differently than other students?

Elaine: Athletes report feeling stuck between the expectations of their classes and expectations of their teams.

Jim Swartz: At most schools, there is a lot more separation between athletes and other students than there is here.

Clark Lindgren: One way that athletics is different than other extra-curricular activities is the loss of class time for athletes because of road trips. Have the leadership in the athletic conferences considered working hard to reduce this impact (eg, trying to make a schedule with reduced travel time)?

Chuck Sullivan: Since enrollment at Grinnell has increased, Biology is offering more Friday afternoon labs. This has increased the conflicts between class and athletic schedules, and labs are hard to make up. It would be great if students could be more proactive in thinking about their sports schedule when scheduling their courses.

Diane Robertson: Over the years, the schedule for every sport seems to have expanded, which also increases the conflict. The more dates we add, the more conflicts there are, and the more students feel stressed and stuck in the middle. There also seem to be lots more out-of-season time commitments for students than there used to be, (eg, fall baseball, captains' practices, etc).

Clark Lindgren: We also teach science differently than we used to 10-15 years ago. It used to be more lecture oriented, and students could get away with missing occasional classes. The

new more interactive teaching style really doesn't allow for this, regardless of how smart the students are and how hard they work. Having to miss class sessions that involve group work really does put these students in a different category.

Bob Cadmus: I have had students turn down academic activities because of out-of-season practices.

Greg Wallace: Each sport now has official "non-traditional seasons" that allow this (eg, fall baseball). On the other hand, captains' practices are student organized, and we can't stop them from having informal games.

Chuck Sullivan: I have noticed that many students do better academically when their sport is in season than they do out of season. Perhaps somehow the added demands help them get organized.

Elaine Marzluff: There is data that supports this nationally.

Jim Swartz: The reason that non-traditional seasons got added was to help with college retention. Prior to doing this, first year students in spring sports were not allowed to have any contact with their coach, and many of these students dropped out at the end of the first semester. Contact with coaches can be good mentoring relationships.

Mark Schneider: First, I think it would be good for faculty members and coaches to learn more about one another's jobs and concerns. With that background discussions about this are more likely to be pleasant and productive than discussions without that knowledge. Second, the data that shows students doing better academically in season is aggregated across sports. When the data is disaggregated, the picture changes: some high-profile sports have a detrimental effect on academic performance. This is a touchy topic because these sports draw large audiences.

Greg Wallace: Please don't hesitate to send an email if there is a problem with a particular sport or a particular athlete.