Science and Math Liaison Meeting

April 3, 2015

Present: Steven Bogaerts, John Caraher, Bridget Gourley, Jeane Pope, Pam Propsom, Jackie Roberts, Brian Wright

John—Shared CAPP’s proposal for the new gen ed requirement. CAPP thought it was important to have a “story” for why we have this requirement. The italicized part is the story and the regular font is the actual requirement. There wasn’t a lot of discussion about the lab part in CAPP; they wanted to start with it, but it would be easy to remove. Jeane asked what was meant by “reasoning with formal language” and John said that probably refers to Logic. These are supposed to be “foundational” courses (not having a lot of prerequisites). Jeane said Geo department does not endorse the proposal because it doesn’t see Logic as fitting in with the Math/Science group; they have a similar concern if Economics were to go into the Mathematical and Logical Reasoning group. The proposal relegates Science to one course; seems even worse than our current requirement which has 2 courses in 8 departments, and now it would be 1 course in 6 science departments, and 1 course in perhaps 2 departments (Math, Science), with maybe a couple of other courses (e.g., Logic) fitting in.

Bridget—How is the Mathematical and Logical Reasoning requirement different from our current Q requirement? John sees Q as different from this; for example, he doesn’t see Calculus as a Q course.

Steven—Some of the TOSLS (Test of Scientific Literacy Skills) goals fit in Computer Science, some don’t. The way CS1 is now, it would have a hard time addressing some of the scientific literacy goals. He thinks CS1 fits more in a Mathematical and Logical reasoning camp.

Jackie—Everything that meets Math/Logic requirement would meet the Q requirement, so the Q seems redundant. John thinks this might force a good, much-needed discussion about Q. Could some courses have an S (Science), others an M (Math), and others SM (both), and students could choose how to count the latter? There were concerns that we don’t have sufficient staffing to cover the proposed Math/Logic requirement (unless Econ counts).

Steven—One possibility is that we could say that at least one lab course is required *across* the Natural Science and Math/Logic groups (e.g., a student could take Intro Psych to meet Science requirement and CS with lab to meet Math/Logic and the lab requirement).

Jeane—asked if there are data showing that classes focusing on these goals show improvement long-term and whether can one class do this? Pam said that the journal article the TOSLS came from compared Intro Bio courses taught by traditional method vs. interactive/project-based learning; results showed students who took the latter course did significantly better on the TOSLS than those who took the traditional course. One course did it, but this was measured immediately at the end of the semester and not long-term.

Bridget—what are DePauw’s gen ed requirements compared to those of other institutions? Are we slim? Pam had looked at GLCA and ACM schools, and most have a 2 course science and math requirement, so DePauw is in the pack.

Brian—We do need assessment data to make any sort of argument about whether students are benefitting from anything we’re doing educationally at DePauw.

John—Doesn’t think the faculty at large will care about how we “dice up” our SM part of the pie, so we can continue to refine and make proposals regarding the SM requirement. Many people liked Jackie’s S, M, SM proposal. Pam—*all* departments should have to make the argument about why their courses meet the Science and/or Math requirements (and this shouldn’t be the case just for Human Origins or Logic; we should all have to explain how our courses meet these learning goals). And we should be focusing on learning goals. Bridget—these should be on the syllabus.

Jeane—Would Jackie and Pam draft comments from the SM Division? Discuss what’s strong about CAPP’s proposed model, what the concerns are, make a friendly amendment? Maybe write something up and allow people in the SM division to sign or not. This could be our discussion for the Brown Bag. Then we could read this at the Faculty Meeting. Bridget—From a procedural perspective, it’s helpful if we have a specific alternative proposal that faculty could see before the May faculty meeting when we vote. The division could give something to CAPP and they could endorse it.

Larger issues

--How do we make sure that science and math classes that count towards these requirements address these scientific literacy goals?

--How do we assess to make sure we’re being successful with student outcomes?

We really like the idea of the divisions talking about how their courses meet the objectives.

Division could also make a statement about our own commitment/plan for assessment, improving our courses to meet the objectives.

Pam will send notes around to everyone for approval before we put them on the WISER website.

Get an ITAP student to maintain WISER website, archive all committee minutes.