

**November 4, 2016 – CLEP & DSST Faculty Conference**  
**NOTES – Natural & Physical Sciences**

**General Discussion:**

- We are concerned that the tests don't all match, in terms of how much coverage of a different topic there might be. In other words, how much coverage is there of process of science? Is it on all of them? Can they guarantee this?
- The tests focus on factual knowledge rather than process of science, critical thinking, etc. (BIO)
- Questions on Content Criteria: Process of science, quantitative literacy. These are not listed in the percentages we were given.
- If we give credit without equivalency, it counts as credits but it's not a major course. How is this transcribed? We have some confusion about this? What about DWDs?

**Discussion w/ John Lanning (HEC):**

- AP, the institutions supplied a GT Category and a Course. Transferability of PLA credit is a problem that hasn't been tested yet. We're concerned about this. We already have a complaint about this. Non-majors courses vs. STEM courses. This is a bit tricky. Generic courses are listed in the AP Tables. Is PLA transcribed as such? How do institutions transcript PLA credit?
- CU has a policy in place. CCCS is working on one. In environmental science and geography, GT Categories are mixed. This complicates things as well.
- It's listed as transfer PLA credit, at least at CU. Receiving institution has authority to ask for the CLEP Scores.
- By using PLA credit, it's only guaranteed toward gen-ed, but not toward the major.
- The lack of labs is a problem. The best we can do is generic, SC-2 credit. Wouldn't count towards the major or toward a specific course.
- There's a question about what is required of the 4-years in terms of transfer. How much pressure is their going to be to accept 2-year courses as major courses?
- Let's say a student fulfills general BIO requirement with a mix of CLEP and real credit. What does the four year college do? We're going to look at whether receiving institutions must accept the decision of the sending institution on PLA credit.
- All of these are legitimate issues. There's going to be pressure on 4-years to accept sending institution's decisions.
- CU and CSU have data that supports liberal arts but not STEM in upstream courses. Is it in the student's best interest to accept all of this? If they're not solid in a foundational course and they continue, it can really hurt them. Med schools have some reservations about taking all of this.

- A statewide policy treats every institution the same and we're all very different. Different admissions, different target audience, etc.
- There's different definitions of student success. Are they going to Med School, a BS in science or a Business Major?

### **Concerns we have with the courses:**

- Taking the test multiple times gave inconsistency in content percentages. One was a practice test and one was an actual test, but the difference is disturbing.
- Quality of the science is a bit off – Energy is listed under forces in the AST test and it's not a force. There were some things on the BIO test that were also a bit challenge-able.
- Level of questions is low – not majors level. Lots of memorization and low Bloom's taxonomy.
- We don't see three of the four GT Content Criteria at all. (B, C and D)
- There seem to be a lot of memorized minutia type questions.
- The competencies are also lacking. There may be some questions that address these, but we don't have evidence that they're covered. It's tough to test this stuff on a multiple choice test.
  - Inquiry and analysis
    - Are they showing problem solving? The people who took the tests feels it may be there, but not a lot.
    - Interpret and analyze evidence. Draw conclusions. – Again – there's some of this but it's very limited.
  - Quantitative literacy – Again, we're just not seeing this. There are some graphs and plots on the BIO exam, but SLO 2 is not being addressed.

### **Specific Exams:**

#### ***Environment and Humanity:***

- Do we want to give this course credit?
  - No. We'd need supplemental submissions.
- Do we agree with the GT Pathways Content area?
  - No. It doesn't meet the GT Pathways criteria.
- What is the equivalent?
  - None of our institutions have an equivalent course in any science prefix.

Justification: The test is purely memorized knowledge. It's a mix of science and other stuff. There are questions about accuracy and some of it is minutia. It doesn't show scientific method or nature of science.

#### ***Biology:***

- Do we want to give this course credit?
  - We could give 3 gen-ed, non-major, GT credits for this course. We do have some reservations because it weakly covers some GT criteria and is missing others entirely.
  - We are fine with the ACE cut scores.
- Do we agree with the GT Pathways Content area?
  - Yes for SC-2.
- What is the equivalent?
  - Because there is no lab, we have no equivalents. It's definitely non-major.

***Astronomy:***

- A. Do we want to give this course credit?
  - a. We could give 3 gen-ed, non-major, non-GT credits for this course.
  - b. We are fine with the B-level ACE cut scores.
- B. Do we agree with the GT Pathways Content area?
  - a. No. It just doesn't cover enough of the competencies/SLOs or Content Criteria to be GT.
- C. What is the equivalent?
  - a. Because there is no lab, we have no equivalents. It's definitely non-major.  
At present, we have credit as follows: ASU – an elective, CSU – GT SC2, UCD considers it GT, FLC and UNC don't take it. CCCS has no matching course and we're not comfortable with the GT designation. It's fine as a non-GT elective.