



Report to ICC on TAP Work on Seven High-Unit STEM Disciplines

December 13, 2023

Six FDRGs or partial FDRGs have met. Jim has been looking at UC major requirements by campus and putting together some spreadsheets. This is super helpful!! Here is the outcome and suggested next steps:

Overarching for each TMC Request for Exceptions:

With each request for up to an additional 6 units and/or partial Cal-GETC completion in the proposed TMC, samples of draft ADTs under the proposed TMC parameters should be included from multiple colleges to show the actual number of units that would be needed.

Mathematics

Send out a proposed TMC that could align with a modified UCTP provided UC agreed.

- Required Core – Calculus 3-semester Sequence; Linear; Differential Equations
- Options – List A (6 units minimum): Calc-based Physics, Biology for majors, Chemistry for majors, computer programming, proof, discrete math, intro to statistics, data science
- Jim, Ginni, Craig to draft the proposed TMC – Ginni will discuss with Krystinne on how to send it out with a survey.

Detailed information would need to accompany the proposed TMC:

- Explanation on why CCC students transferring to CSU would/should be required to take additional courses which are not currently required in the TMC (although most students eventually take those courses anyway) – AB 928
- What a new TMC would guarantee for students: transfer to a CSU, meet major preparation admission requirements to most UCs (not a transfer guarantee)

Biology

We need to schedule a DIG to take place ASAP in the spring.

Here is what I sent out based on the FDRG meeting on Friday:

Based on yesterday's FDRG meeting, here are my thoughts:

1. *I think we need a DIG meeting to take place and invite biology faculty from all three systems. There was no CSU representation, and no biology faculty from UC. In addition, there were two biology faculty from one CCC, so some balance is needed.*
2. *Before the DIG, we need to provide some reading materials that include the TMC process and the role of CSU and UC, UCTP explanation, AB 928 goals/directives, biology requirements at CSU and UC campuses, and TAP goals.*
3. *At the DIG, I think it needs to be very structured with a planned presentation on the current situation: TMC process and the role of CSU and UC, UCTP explanation, AB 928 goals/directives, biology requirements at both CSU and UC campuses, TAP goals. In addition, we should lay out the outcome goals of the DIG meeting and process moving forward.*

This will take some work on our part (TAP WG et al) to plan. I think we set a date for the DIG meeting, and then invite faculty to prioritize. Our next TAP WG is January 9, I believe.

Computer Science

I don't have notes on the CS FDRG/partial FDRG meeting. I'm thinking... it might be good to have a DIG for this group like the one for biology, no?

Attached is the proposed TMC based on the conversation. We need to decide if we should just send this out with an explanation. I do think it will be confusing to folks though.

Chemistry

The Chemistry FDRG/partial FDRG meeting went very well. See the attached draft TMC/UCTP. Here is the ask:

- 6 additional units for the ADT;
- permit two Cal-GETC courses to be taken after transfer: one Area 3, one Area 4;
- permit a substitution in Area 5B with Organic Chemistry; or permit Area 5 to be completed with two science courses from different disciplines
- Only require 2 semesters of calc-based physics for the ADT (third term could be taken after transfer) (this would allow for the full math series of Calc I, Calc II, Calc III, DE, Lin Alg

The group suggested sending out a survey for feedback on this one.

Engineering

There were not CSU faculty. Although one of the members did say he knows of CSU faculty interested in participating. Decided to begin with proposing an Electrical Engineering TMC that would also meet major prep for UC. Considerations for a TMC:

- Include Linear Algebra as it is expected for UC
- One course from Cal-GETC Area 3 and one course from Cal-GETC Area 4 are deferred for completion after transfer
- Permit Cal-GETC Area 5 to be fulfilled with two science courses from different disciplines instead of one from physical science and one from biological science

I think this could go out with full explanation and a survey for feedback.

NOTE: This is NOT a TMC modification. This would be a **new** TMC. So, we need to consider that process.

Physics

Additional coursework was needed for transfer to UC. In the TMC it looks like it might be able to be completed with 60-61 units, but in reality, we have found it is actually not possible.

- Added Differential Equations and Linear Algebra
- Added a General Chemistry Sequence
- CSU faculty indicated that the current TMC/ADT is weak but they had to go with it as there was not an option of IGETC for STEM in the early days.
- The total major units are 39-40

I think this one is ready for a survey, again with full explanation.