# Course Identification Numbering System (C-ID) logo. Transfer Model Curriculum 5-Year Review Summary - Chemistry

Please attach a copy of the vetting results for the TMC to the document.

1. Provide a breakdown of the respondents to the survey:

* # of CCC respondents:
* # of CSU respondents:
* # of UC respondents:
* Total responses: 67

**Provide a written summary of the feedback from the survey to the question below:**

1. Were there any changes suggested to the List A of the TMC? N/A

FDRG recommends:

1. Were there any changes suggested to the List B section of the TMC? N/A

FDRG recommends:

1. If appropriate, were there any changes suggested to the List C section of the TMC? N/A

FDRG recommends:

1. Were there any changes suggested to the CORE section of the TMC?

Yes

FDRG recommends:

The FDRG recommends that the TMC be changed from its 2015 version to reflect an increase in the number of organic chemistry units from 8 to 10. A ten unit Organic Chemistry series is consistent with the vast majority of the CC curricula as well as a majority of the UC curricula for Chemistry Majors.

This change in the TMC (reflecting an increase in the unit count for the 150 and 160S core course descriptors) was vetted in summer of 2020 and received support from respondents. In response to the question, “are there any changes you would like to see to the CORE section of the TMC?”, 17% responded ‘yes’ and 83% responded ‘no’.

This increase in units was the only substantial change in the TMC from its 2015 version. In the written comments among the 67 responses, 2/67 explicitly stated that they did not want to see an increase in the number of Organic Chemistry units, while 4/67 explicitly stated that they *did* want to see an increase in the number of Organic Chemistry units.

1. Please provide any general recommendations from the feedback received from the vetting.

Aside from the Organic Chemistry unit count issue, the first round of vetting brought a number of requests for greater clarity regarding the Learning Outcomes section of the Descriptors for General and Organic Chemistry. In addition, there were requests to move specific content from the first to the second semester or vice-versa. This led the FDRG to make additional revisions to the Descriptors for courses listed as part of the TMC, providing example language for the Learning Outcomes and removing the “floating topics. ” The topics were instead placed in either the first or second semester content lists along with an explicit statement allowing for some flexibility in timing of topics between Semester One and Semester Two. This change was made for both the General Chemistry (120S) and Organic Chemistry (160S) series.

The changes to the Chemistry TMC seem to have had the support of the majority of respondents (83%). Despite this, the problem remains that many CC’s cannot offer the ADT in Chemistry due to the high unit count for the CORE major-preparation courses which include Physics and a complete calculus series. This problem cannot be addressed by removing Chemistry courses that Chemistry transfer students will need in order to remain on target for their degrees. The FDRG recommends that consideration be given to this high-unit count major so that the students who wish to complete their degrees as efficiently and affordably as possible be allowed to do so without putting them behind their non-transfer peers. This may be accomplished by limiting the GE pathway to IGETC for STEM, which will allow the degree to be completed within the 60 unit limit. The CSU GE-breadth pathway will not allow students to complete in 60 units.

**Provide a written summary of the FDRG’s recommendations and attach a copy of the revised TMC, including the date of completion of the review.**

The Five year review of the Chemistry TMC brought up discussion of the unit count allotted to the Organic Chemistry series. While there are some institutions that offer 8-unit series, most require a 10 unit series of their Chemistry Majors.

Community colleges must create programs that allow students to transfer to the institution of their choosing and must not narrow their options to only those programs with the fewest requirements.

Faculty consensus is that program requirements dictate a minimum of 5 units per semester or 10 units for the Organic Chemistry series. This is supported by the fact that the majority of institutions both at the Community College and four-year level, offer 10 unit Organic Chemistry series for their Chemistry majors. The previous TMC 4-unit Organic Chemistry course would therefore represent a reduction in the course content for most Community colleges, placing students at a disadvantage relative to their non-transfer peers. It is the faculty position that reduction in Organic Chemistry units would not be in the students’ interest.

For these reasons, the TMC in Chemistry has increased the organic chemistry unit requirement from 8 to 10 units.

It is important to note that the unit limitations imposed by the TMC may only be accomplished through an IGETC for STEM pathway, since the additional course required of the CSU Breadth pathway makes it impossible for colleges to offer the degree. Colleges are advised to clarify for students completing this ADT in Chemistry that an additional course will be required of them if they transfer to a CSU.