

CURRICULUM MAPPING AT SAN DIEGO STATE UNIVERSITY: FINDING THE DLO TREES WITHIN THE CURRICULUM FOREST

*Prepared by the Office for Curriculum, Assessment, and Accreditation in collaboration with the
University Senate Student Learning Outcomes and Program Assessment Committee*

OVERVIEW – Curriculum mapping is a powerful collaborative process that promotes collective faculty analysis, discussion, and action around curriculum design in service to student engagement, development, learning, success, and achievement. Note that the process requires a consensus-based set of DLOs as described in Part I and leverages the collective Curriculum perspective and expertise of the entire faculty community. With these two core ingredients and a commitment to taking a student-centered approach, faculty can use Curriculum mapping to address the following sequential and developmental questions, which are explored in this section.

- A. Which of our courses address which of our Degree Learning Outcomes (DLOs)?
- B. How do our courses build capacity for student achievement of our DLOs?
- C. Which Course Learning Outcomes (CLOs) align with which of our DLOs?
- D. What opportunities exist within the curriculum for the assessment of our DLOs?

Curriculum mapping should be viewed as a developmental and iterative process for Curriculum improvement, and may naturally lead to changes across the curriculum ranging from additions, modifications, and deletions of DLOs to “tweaks” within courses to strengthen opportunities for all students to “see the forest for the trees.” Because of the power of this process, Curriculum mapping is a required component for proposing new degree programs within the CSU as well as for periodic Academic Reviews at SDSU, where units are asked to reflect on where they are and where they want to go with respect to the broad content and structure of their degrees.

PREPARATION – Prior to engaging in Curriculum mapping, it is useful to build a general template wherein the first two columns list your degree’s courses and their constituent CLOs, respectively, and the first row lists your established DLOs. An example template for a hypothetical BA in History is provided on the next page; note that its CLOs and DLOs are abbreviated or omitted for conciseness. Some suggestions for constructing a flexible template include:

- *Pick an application that works for your faculty* – Curriculum mapping can be readily done using whiteboards, chalkboards, or butcher paper, but digital approaches can help facilitate, record, and build upon efforts in the long-term. Microsoft Word tables have flexible formatting, whereas Excel sheets allow larger templates and multiple efforts as worksheets within a single file. Google Docs and Sheets have a bit less flexible formatting ability, than, but readily allow sharing access for crowdsourcing and live updates among multiple parties.
- *Establish an initial level of detail and inclusiveness* – Programs often initially choose to focus on just required degree components (e.g., major courses, internships, international experiences) and then later incorporate other degree components (e.g., electives, supporting courses, etc.). That said, programs may want to building a starting template that captures all requirements, and then move forward in a prioritized sequential manner.
- *Use prefixes for course and their respective CLOs* – Using alphanumeric prefixes as shown in the example (e.g., A-K in the course column; A.0-A.4 for the first course in the second column) will allow both high-level mapping at the course-level (by sorting by the first column) or on more granular mapping at the CLO-level (by sorting on the second column). Prefixes can also serve to reflect the general pathway through which student experience the curriculum.
- *Seek faculty feedback and consensus* – Regardless of your template approach, a draft should be shared with *all* faculty for input and endorsement *prior* any *actual* mapping activities. This approach will help minimize potential sidetracking discussions during the limited shared-time of program meetings, where the focus should be on mapping *progress*.

After establishing the template for your degree, your program can use it to explore the four questions posed in the Overview and discussed below. Regardless of how your program uses Curriculum mapping, keeping a focus on outcomes at the degree and course levels will keep the conversations constructive, collaborative, and evidence-based. Programs offering multiple degrees might consider mapping their degrees in parallel; while more complex, this approach promotes discussion of how the degrees are interrelated and differentiated.

*For questions, assistance, or professional development around assessment, please contact
Stephen Schellenberg, AVP for Curriculum, Assessment, and Accreditation (saschellenberg@sdsu.edu).*

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Course	Course Learning Outcome (CLO)	DLO1. Compare...	DLO2. Describe...	DLO3. Construct...	DLO4. Differentiate...
A. HIST101 (GE Gateway)	A.0.				
	A.1. Describe...				
	A.2. Estimate...				
	A.3. Interpret...				
	A.4. Analyze...				
B. HIST204 (Major Gateway)	B.0.				
C. HIST230 (Prereq: A or B)	C.0.				
D. HIST320 (Prereq: C)	D.0.				
E. HIST330 (Prereq: C)	E.0.				
F. HIST390 (Prereq: C)	F.0.				
G. HIST420 (Prereq: D/E/F)	G.0.				
H. HIST450 (Prereq: D/E/F)	H.0.				
I. HIST440 (Prereq: D/E/F)	I.0.				
J. International Experience	J.0.				
K. HIST480 (Pre/Coreq: G/H/I)	K.0.				

A. WHICH OF OUR COURSES ADDRESS WHICH OF OUR DLOS? – This mapping activity is a natural first step, can be completed prior to a faculty meeting, and builds a basic framework for more detailed mapping efforts. To start, sort the finalized template by the “Course” column and hide or delete the “CLO” column so that attention is squarely focused on the course level. This version can then be shared with each faculty member with a request that they (1) consider the courses for which they frequently serve as the primary instructor(s) and (2) add their initials to the cells where these courses build capacity for student achievement for a given DLO. Multiple instructors for the same course may well mark different DLOs, which represents an opportunity for discussion in and of itself! Once these efforts are compiled and shared, the faculty can then discuss *in person* the distribution of connections within the resulting course-DLO map. Ideally, this discussion will naturally segue into what constitutes capacity-building towards student achievement of a given DLO at the course level (see the next activity) during the same faculty meeting.

B. HOW DO OUR COURSES BUILD CAPACITY FOR STUDENT ACHIEVEMENT OF OUR DLOS? – This mapping activity builds on the above by having faculty collectively discuss and code the relative level of capacity building in each of their marked courses for a given DLO. Three of many sets of codes are:

I/P/D: Introduced, Practiced, and Demonstrated (student-centered; preferred here)

I/R/B: Introduced, Reinforced, and Emphasized (teacher-centered)

B/I/A: Basic, Intermediate, and Advanced (competency-centered)

An outcome of this activity is a shared and transparent understanding of *how* the curriculum *currently* builds capacity for student achievement for *each* of its DLOs as well as the discovery of Curriculum “gaps and overlaps” that might surface in the form of such statements as:

*“Students are **Introduced** to DLO-1 in these three lower-division courses, but never given the opportunity to **Practice** or **Demonstrate** achievement of DLO-1 later on. Is DLO-1 necessary? If not, let’s remove it. If so, where can we provide opportunities for students to practice and demonstrate achievement in this area later in the curriculum?”*

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“Students are clearly expected to Demonstrate master of DLO-2 in this upper-division course, but otherwise the curriculum doesn’t Introduce it or provide opportunities to Practice achievement of DLO-2. Where can we build student capability in this DLO earlier in the curriculum?”

“Our gateway course Introduces DLO-4, but students don’t encounter it again until asked to Demonstrate its achievement within the senior capstone course. Where can we provide opportunities for students to build capacity with respect to DLO-4 in our intermediate courses?”

C. WHICH COURSE LEARNING OUTCOMES (CLOS) ALIGN WITH WHICH OF OUR DLOS? – Given that student achievement of DLOs largely builds through courses and that all courses have some explicit set of CLOs, this third mapping activity involves focusing on the matrix’s CLO column where relevant instructors can all the CLOs and specific which align with which DLOs. Note that the *lack* of direct alignment of a given CLO to any of the DLOs does *not* mean that the CLO lacks value; indeed, course content and CLOs *should* be more than an atomization of DLOs. However, if the *vast majority* of a *required* course’s CLOs *cannot* be aligned with *any* DLOs, then a clarification of the course’s *intended* Curriculum role and refinement of its *enacted* Curriculum role are probably warranted. Both this and the preceding mapping activity will help faculty contextualize the required courses with respect to their DLOs. An excellent outcome of this mapping effort is to explicitly state these CLO-DLO alignments within course syllabi, which increases the degree’s transparency, connectivity, and expectations for students.

D. WHAT OPPORTUNITIES EXIST WITHIN THE CURRICULUM FOR ASSESSMENT OF DLOS? – This fourth mapping activity leverages the efforts of the preceding three activities by having faculty identify and describe, in matrix cells, those course-embedded assignments, projects, exam questions, etc. that assess the CLOs that have been aligned with DLOs. Programs can then examine this map of “low hanging fruit,” and use it to develop immediate to long-term plans for which course-embedded items might be leveraged as one means to assess student development and achievement with respect to the aligned DLOs. This map can also be used to identify Curriculum areas that would benefit from the development of more course-embedded assessments that could facilitate assessment at both the CLO and DLO levels. In addition to these “in-house” assessment opportunities, programs are encouraged to scan the literature on the scholarship of teaching and learning (SoTL) within their discipline for other available assessments, concept inventories, etc. that might be aligned and adopted to their curriculum.

FINAL THOUGHTS ON CURRICULUM MAPPING – The goal of Curriculum mapping is to facilitate, inform, and coordinate faculty discussion and action around student learning, degree cohesiveness, and program assessment. Thus, Curriculum mapping is not a one-and-done endeavor, but an ongoing developmental process that helps keep everyone, literally, on the same page about degree structure and content as the broader discipline evolves and local faculty community changes over time. Note that Curriculum maps are not just for faculty, but should also be shared with students, parents, and the broader public via the academic unit’s webpage. Faculty are also encouraged to discuss the Curriculum map with students at the start of major courses to help contextualize the particular course within the broader degree program. In the words of Doyle’s (2008), just imagine:

“If we were to give students who are declaring their major not only a checklist of the courses they need to complete, but also a map that illustrates where the skills, major ideas, and concepts learned in their beginning courses . . . will reappear in their later courses, we would be providing clear evidence that their education does not consist of a set of disconnected courses but, rather, an integrated, connected set of skills and knowledge that is purposefully designed to prepare them for a lifetime of learning.”

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