This document is being publicly released in October 2023. It is a draft of the final summary report for the Common Course Numbering Task Force (hereafter “CCN Task Force”), which the CCN Task Force will discuss at forthcoming public meetings (October and December 2023). An earlier version was released in August and discussed by the CCN Task Force at its August public meeting.

Details about the CCN Task Force, including its meeting agendas and materials, can be found at its website:
https://www.cccco.edu/About-Us/Chancellors-Office/Divisions/Educational-Services-and-Support/common-course-numbering-project
ACKNOWLEDGEMENTS

The Common Course Numbering (CCN) Task Force wishes to thank many critical supporters who made this work possible. Our co-chairs led us in a robust and effective learning and design agenda that resulted in a strong set of recommendations. Sincere thanks to Virginia “Ginni” May, Past President of the Academic Senate for California Community Colleges and Professor of Mathematics and Statistics at Sacramento City College, and Tram Vo-Kumamoto, Past President of the California Community Colleges Chief Instructional Officers and Vice President of Instruction at Saddleback College.

Staff members of the California Community Colleges (CCC) Chancellor’s Office (CCCCO), particularly Sean Madden, Bob Quinn and Amy Smith, ensured our meetings were seamless and our work products were of high quality. Erin Stack and Anthony Enriquez and their colleagues at the Foundation for California Community Colleges provided exceptional meeting design and delivery support. Sova and its transfer team of Alison Kadlec, Lara Couturier, Cristen Moore, Leslie Fischbeck and Patricia Parker provided both expert facilitation and strong transfer knowledge.¹

We are grateful to the CCC students who shared their transfer experiences with us: Marco Martinez, Executive Vice President, Student Senate for CCC (primary college is Bakersfield College); Casey Chang, Vice President of Communications, Student Senate for CCC (primary college is Mission College); Rachel Alazar, Pre-Nursing Student at Palomar College (primary college is Palomar College); Gerardo Reyes, Inter-Club Council President, Reedley College Associated Student Government (primary college is Reedley College).

Representatives of several CCC districts graciously shared their experiences and knowledge with us. With thanks to:

- San Diego Community College District: Shelly Hess, Dean of Curriculum; Andrew Hoffman, English Faculty and Past San Diego Mesa College Curriculum Review Committee Co-Chair; and Carmen Scott, Curriculum Technician.
- Peralta Community College District: Nancy Cayton, Berkeley City College Curriculum Specialist; Laura Bollentino, Laney College Articulation Officer; and Heather Sisneros, Laney Curriculum Chair and District Curriculum Committee Co-Chair.
- Los Angeles Community College District (LACCD): Elizabeth Atondo, LACCD Academic Senate Curriculum Chair and Articulation Officer; Dan Keller, LACCD Curriculum Dean; and Cathleen Rozadilla, East Los Angeles College Faculty Articulation Officer.

¹ Sova is a mission-driven consultancy hired to support the CCCCCO in facilitating the CCN Task Force. You can learn more about Sova at www.sova.org
Los Rios Community College District: Phil A. Smith, Professor, American River College Mathematics Department and Lead Programmer, SOCRATES Curriculum Management System; Rhonda Farley, English as a Second Language Professor, Department Chair, Cosumnes River College; Renee Medina, Curriculum Chair, Sacramento City College; and Rose Giordano, Dean of Education and Health Professions, Sacramento City College.

In addition, we thank Assemblyman Marc Berman and his office for the investments that made this work possible. The CCN Task Force also benefited from research conducted by a few sources. Sheila Miller Rivera, a consultant to Sova, authored the Common Course Numbering Landscape Scan. From the RP Group, Daisy Segovia, Senior Researcher and Alyssa Nguyen, Senior Director of Research & Evaluation supported a survey and qualitative research study focused on understanding CCC district experiences with CCN.

Lastly, we thank the many stakeholders in the CCCs, ranging from students to faculty and IT professionals, who have watched our progress with interest, provided feedback and started preparing for the coming implementation. We look forward to the system wide collaboration ahead.

PLACEHOLDER: Letter from the Deputy Chancellor
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EXECUTIVE SUMMARY

(May need to be updated as the CCN Task Force keeps working through December 2023.)

Assembly Bill 1111 (AB 1111) calls on the CCC to adopt a student-facing common course numbering (CCN) system in order to “streamline transfer from two- to four-year postsecondary educational institutions and reduce excess credit (unit) accumulation.”

To spur this effort, the California Community Colleges Chancellor’s Office (CCCCO) formed the AB 1111 Common Course Numbering Task Force (CCN Task Force) to make recommendations for a systemwide implementation plan. Reflecting the CCCC0’s participatory governance system, the CCN Task Force includes broad and diverse representation from across the system’s 72 districts and 115 colleges. Members reflect key stakeholder groups invested in and intimately knowledgeable about transfer student success, including: community college students themselves; faculty leaders, including representatives from the Academic Senate for CCC; administrative leaders, including representatives from the CCC Chief Instructional Officers; student service professionals, including articulation officers; student success deans; technology officers; institutional effectiveness researchers; chief executive officers; and trustees. Critically, the CCN Task Force has benefited from robust engagement of the CCCs four-year transfer partners, the California State University (CSU), University of California (UC), and California’s independent colleges and universities. The CCN Task Force is collaboratively led by two co-chairs: Virginia “Ginni” May, Past President of the Academic Senate for CCC and Professor of Mathematics and Statistics at Sacramento City College, and Tram Vo-Kumamoto, Past President of the CCC Chief Instructional Officers and Vice President of Instruction at Saddleback College.

The pages that follow describe more about the CCN Task Force and its work, including the history of common course numbering in California—and why this effort is different and destined...
for success. Perhaps most importantly, this report includes the CCN Task Force's Recommended Implementation Plan, which features recommendations such as the following:

- Forming a statewide intersegmental CCN steering and operational structure for ongoing CCN course assessment and alignment processes (considerate of local curriculum and catalog processes);
- Designing work groups to carry the work forward, inclusive of their charges, membership, guiding principles and activities;
- Establishing which course elements must be identical or equivalent for a course to be numbered the same;
- Assessing technology needs and solutions that will increase data-informed decisions, expedite operational processes, and create a streamlined CCN repository; and
- Identifying and addressing where CCN changes to CCC courses will potentially disrupt existing course articulation/transferability with CSU, UC, and AICCU segments, while simultaneously working across segments to ensure maximum articulation of commonly numbered courses (recognizing CSU, UC, and AICCU are not currently mandated to participate).

The CCN Task Force acknowledges that CCN presents a historic opportunity to make the California higher educational system easier to navigate and finally addresses a long-recognized barrier that impedes countless students. While implementing a CCN system will not magically solve all of the pain points in the transfer student experience, it is necessary foundational work and if done well, will enhance credit mobility and improve equitable associate and baccalaureate degree attainment. The CCN Task Force feels confident that the implementation plan described in this Summary Report can and will result in a CCN system that has the potential to greatly benefit students and meet the stated intent of the AB 1111 legislation. The CCN Task Force encourages all necessary stakeholders to move forward quickly and responsibly, ensure funding and resources are available for an implementation and sustainability of this magnitude, and center the equitable success of our students.
I. INTRODUCTION

Serving Today’s Diverse and Highly Mobile Learners

The CCC is the nation’s largest system of higher education, providing nearly 2 million Californians affordable and in-demand postsecondary education and training across its 116 campuses. Offering a wide array of programs and robust student support, the CCC meet today’s learners “where they are.” As a result, the system enrolls a remarkably diverse student body, including learners of diverse ethnic backgrounds, low-income adults, and nontraditional age students.

California Community Colleges meet today’s students “where they are”:3

- 69% of students are people of diverse ethnic backgrounds
- 47% of students do not pay fees
- 42.3% of students are adults over age 25

With its extensive reach, the CCCs have an important role to play in making a postsecondary credential accessible and preparing learners for in-demand jobs in a global economy. This includes providing a clear and efficient transfer pathway for those seeking a baccalaureate degree. In the 2019-20 academic year alone, over 130,000 students successfully transferred from a CCC campus to a four-year institution.4 The system’s role in making lower-division coursework broadly accessible and aligned to baccalaureate degree pathways is laid out in the California Master Plan for Higher Education. Today, one-half of all California State University graduates and one-third of all University of California graduates began at a CCC.5

However, these are not the only transfer students that the CCC system produces. Today’s learners complete coursework across multiple CCC campuses – sometimes enrolling at more than one campus simultaneously for multiple reasons. On average, 45% of CCC graduates who completed associate degrees over the last decade completed coursework at more than one CCC campus.

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4 Ibid
5 Ibid
As students become increasingly mobile, it is imperative that they are able to easily identify, enroll in, transfer, and apply their CCC courses to their educational program of interest.

**Course Numbering Systems: Cutting through the Course Transfer and Articulation Confusion**

Students who take courses across more than one campus are more likely to end up with excess units from taking courses that are duplicative or not applicable to their chosen degree path. This is not surprising considering that the 73 independent college districts of the CCC system maintain local, unique course numbering systems for over 40,000 general education and transfer pathway courses. Deciphering which courses are equivalent across campuses and understanding how these courses apply to requirements of a particular degree pathway can confuse even the savviest of students and most experienced of counselors.

Excess units cost learners valuable time and money and can deter them from reaching their educational goals. The CCCCO has found inequities in who is accruing the most excess units, finding that:

- Male students accrue more units than female students;
- Asian, Filipino, and Latinx students accrue more units than Black and White students; and
- Students 25-34 years old accrue more units than students immediately out of high school.

Replacing the current disparate, locally-developed course numbering systems with one CCN system will cut through the confusion, and can improve the transfer student experience, support the mobility of their units across work and learning, and help today’s highly mobile students reach their educational goals more efficiently.

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6 Common Course Numbering Task Force. October 2022. “Understanding Within-System Mobility and Implications for AB 1111.”


8 Ibid

9 Ibid
Renewed Urgency to Improve Course Transfer

The urgency to improve the student transfer experience comes from both within the CCC and from our external environment. For the past six years, CCC faculty, staff, and administrators have worked with laser-focus to advance student success and achieve the equity-centered goals of Vision for Success, our system’s guiding framework that was adopted by the Board of Governors in 2017.

Vision for Success Goals

1. Increase completion of degrees, credentials, certificates, and job-specific skill sets by 20% between 2017 and 2022;
2. Increase transfers to UC and CSU by 35% between 2017 and 2022;
3. Decrease the average number of credits accumulated by associate’s degree earners to 79 credits by 2022 (down from an average of 87 credits in 2017);
4. Increase the number of exiting CTE students employed in their field of study to 76% by 2022 (up from 60% in 2017);
5. Reduce equity gaps by 40% across all the above measures by 2022, and fully close those gaps by 2027; and
6. Close regional gaps across all of the above measures by 2027.

Across our campuses, there have been numerous and multi-pronged efforts to address excess units and improve equitable transfer student outcomes, including targeted efforts to address course numbering. These include system wide initiatives like the CCC faculty-led Course Number Identification System (C-ID) and local district-wide common course numbering initiatives. While data continue to suggest that transfer students face significant barriers to success, and there has been real interest in and commitment to developing clear information and strong transfer pathways, real structural barriers have inhibited efforts from achieving scale systemwide. Notably, while there have been at least three other efforts to build CCN systems since the 1980s, these efforts have historically been under-resourced and did not gain traction across all segments of higher education and were therefore not successful.

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10 California Community Colleges Chancellor’s Office. Vision Goals and Core Commitments.
Meanwhile, political leaders and external community stakeholders have shown greater interest in improving transfer as a way to equitably increase degree attainment in California. Governor Newsom’s Recovery with Equity Task Force recently elevated the idea of a CCN system as a necessary element of a highly integrated postsecondary ecosystem that supports all learners. This idea evolved with Assemblymember Marc Berman in Assembly Bill 1111 (AB 1111), which calls on the CCC to adopt a CCN system in order to “streamline transfer from two- to four-year postsecondary educational institutions and reduce excess credit (unit) accumulation.” Signed into law in 2021, AB 1111 requires that, “on or before July 1, 2024, both of the following shall occur:

(A) The California Community Colleges shall adopt a common course numbering system for all general education requirement courses and transfer pathway courses.

(B) Each community college campus shall incorporate common course numbers from the adopted common course numbering system in its catalog.”

AB 1111 further stipulates that “the common course numbering system [...] be student-facing [...] and ensure that comparable courses across all community colleges have the same course number.”

To spur this effort, the legislature appropriated $10 million in one-time funding under the Budget Act of 2021 to establish a work group to guide the design and implementation of the CCN system. As the entity responsible for maintaining compliance with CCC state legislative mandates, the CCCCO formed the AB 1111 Common Course Numbering Task Force (CCN Task Force) to serve as this work group. Further, the legislators appropriated $105 million in one-time funds within the 2022-23 budget for allocation to community college districts to support implementation.

12 See California Education Code 66725.5.

This presents an historic opportunity to make our colleges easier to navigate and finally address a long-recognized barrier that impedes countless students. While implementing a CCN system will not magically solve all of the challenges in the transfer student experience, it is necessary foundational work from which we can continue to build. In fact, representatives from several postsecondary systems that have implemented CCN report that CCN is beneficial for students and for state and institutional stakeholders.¹⁴

**II. ABOUT THE CCN TASK FORCE**

The CCCCO is committed to honoring the professional and lived expertise of our faculty, staff, students, and campus leaders who engage on these issues every day. In 2022, the Chancellor’s Office assembled the CCN Task Force to develop the student-centered vision and implementation plan for the CCN system.

The CCN Task force is charged with establishing:

- A definition of a student-facing common course numbering system for all general education requirement courses and transfer pathway courses;
- A recommended implementation plan to guide efforts to establish a common course numbering system that meets the requirements of AB 1111.

**Membership**

Reflecting the CCCs’ participatory governance system, the CCN Task Force includes broad and diverse representation from across the system’s 73 districts and 116 colleges. Members reflect key stakeholder groups invested in and intimately knowledgeable about transfer student success, including: community college students themselves; faculty leaders, including representatives from the Academic Senate for CCC; administrative leaders, including representatives from the CCC Chief Instructional Officers; student service professionals, including articulation officers; student success deans; technology officers; institutional effectiveness researchers; chief executive officers; and trustees.

In addition, the CCCCO recognizes that any effort aimed at improving the transfer student experience must also have active participation and buy-in from the four-year sector. The CCN Task Force thus includes—and has benefited from the robust engagement of—representatives from the Association of Independent California Colleges and Universities (AICCU), the California State University, and the University of California.

Leadership

The CCN Task Force is collaboratively led by two co-chairs: Virginia “Ginni” May, Past President of the Academic Senate for CCC and Professor of Mathematics and Statistics at Sacramento City College, and Tram Vo-Kumamoto, President of the CCC Chief Instructional Officers and Vice President of Instruction at Saddleback College. Their leadership and coordination with the CCCCO over the past two years was instrumental in driving the CCN Task Force’s work forward.

CCN Task Force Members

<table>
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<tr>
<th>Stakeholder Group</th>
<th># of Representatives</th>
<th>Name</th>
<th>Title</th>
<th>College</th>
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<tr>
<td>CCC Students</td>
<td>2</td>
<td>Robert Alexander</td>
<td>VP, Regional Affairs, SSSCC</td>
<td>San Bernardino Valley College</td>
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<td>[Vacant]</td>
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<tr>
<td>CCC Faculty</td>
<td>4</td>
<td>Ginni May (co-chair)</td>
<td>Past President, ASCCC; and Professor of Mathematics and Statistics</td>
<td>Sacramento City College</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cheryl Aschenbach</td>
<td>President, ASCCC; and Professor of English</td>
<td>Lassen College</td>
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<td></td>
<td></td>
<td>John Freitas</td>
<td>Articulation Officer</td>
<td>Los Angeles City College</td>
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<td></td>
<td>Tiffany Tran</td>
<td>Articulation Officer</td>
<td>Irvine Valley College</td>
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<td>CCC Admissions and Registrar Officers</td>
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<td>Victor DeVore</td>
<td>Dean, Student Services</td>
<td>San Diego CCD</td>
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<td></td>
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<td>Meredith Marasco</td>
<td>Evaluator</td>
<td>Butte College</td>
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<tr>
<td>CCC Chief</td>
<td>2</td>
<td>Tram</td>
<td>President, CCCCIO;</td>
<td>Saddleback</td>
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<tr>
<td>Stakeholder Group</td>
<td># of Representatives</td>
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<tr>
<td>Instructional Officers</td>
<td></td>
<td>Vo-Kumamoto (co-chair)</td>
<td>and VP, Instruction</td>
<td>College</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Isabel O’Connor</td>
<td>VP, Instruction</td>
<td>San Diego Mesa College</td>
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<tr>
<td>CCC Chief Student Services Officers</td>
<td>1</td>
<td>Robyn Brammer</td>
<td>VP, Student Services</td>
<td>Cerritos College</td>
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<tr>
<td>CCC Technology Officers</td>
<td>2</td>
<td>Rachel Stamm</td>
<td>Curriculum Systems Consultant</td>
<td>CCC Tech Center</td>
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<td>Rupinder Bhatia</td>
<td>Executive Director, IT</td>
<td>San Jose-Evergreen CCD</td>
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<td>CCC Researchers</td>
<td>1</td>
<td>Jeremy Brown</td>
<td>Dean of Student Success and Institutional Effectiveness</td>
<td>Yuba College</td>
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<td>Superintendent-Pres ident</td>
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<td>CCC Trustees</td>
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<td>Deborah Ikeda</td>
<td>Trustee</td>
<td>State Center CCD</td>
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<td>Aisha Lowe</td>
<td>Executive Vice Chancellor</td>
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<td></td>
<td></td>
<td>John Stanskas</td>
<td>Vice Chancellor</td>
<td>CCC Chancellor’s Office</td>
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<tr>
<td>California State University</td>
<td>2</td>
<td>Marci Sanchez</td>
<td>Assistant Director of Undergraduate Transfer Programs</td>
<td>CSU Office of the Chancellor</td>
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<tr>
<td></td>
<td></td>
<td>Kristin Van Gaasbeck</td>
<td>Director, Liberal Studies and Social Science Programs; and Associate Professor of Economics</td>
<td>CSU Sacramento</td>
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### Timeline of CCN Task Force Activities

Beginning in September 2022, the CCN Task Force began meeting bi-monthly for a total of eight public meetings to create a definition of the CCN system and develop a framework to guide implementation of this new system across all CCC campuses by July 1, 2024.

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<th>2021</th>
<th>2022-2023</th>
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<td>October 6: Bill signed into law and Ed Code 66725.5 established</td>
<td>CCCCO convened the CCN Task Force in eight public meetings from September 2022 through December 2023. CCN Task Force developed its recommendations for a rolling system wide implementation plan, including a recommended governance structure and timeline with milestones and activities</td>
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<td>Budget Act of 2021: $10 million one-time budget designed for CCCCO to establish a workgroup, known as the CCN Task Force</td>
<td>January 2022: $105 million one-time funds for CCN implementation in 2022-2023 budget year</td>
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With facilitation support from Sova, CCN Task Force members engaged in active listening and focused learning with a robust set of content experts, partners, and stakeholders statewide. First, the CCN Task Force grounded its work with an assessment of the available data; the CCCCO presented quantitative data on within-system student mobility, and Sova presented the findings of the landscape scan, which included results from interviews and listening sessions with more than 100 stakeholders across California and the nation; a survey of over 850 stakeholders representing 112 of the 116 CCCs; and reviews and analyses of existing literature and research.
The RP Group also presented results from a systemwide survey to understand the status and design of existing CCC CCN systems. CCN Task Force members also heard from community college students to understand how students presently experience course transfer, and their ideas for a new system.

Next, the CCN Task Force consulted with practitioners from multiple districts within the CCC system that have implemented a local CCN system to understand lessons learned from implementation and key questions to pose and considerations to take into account for a systemwide CCN roll-out. The CCN Task Force also contemplated complex questions regarding how a CCN system for the two-year sector could articulate to the four-year sector and align with other ongoing transfer reform efforts, such as AB 928 implementation.  

Finally, the CCN Task Force established work streams to accelerate progress and conferred on how to present the final implementation plan back to system stakeholders and to the California State Legislature.

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<tr>
<th>Meeting Date</th>
<th>Agenda Items</th>
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| September 29, 2022 | ● Clarify the legislative charge of the CCN Task Force, expectations and roles of members and available facilitation support.  
● Review current data on community college transfer student success.  
● Introduction to the landscape scan on CCN, including lessons from other states.  
● Begin to define a student-facing CCN system for the CCC. |
| November 29, 2022  | ● Hear directly from students to understand their experiences with course transfer.  
● Learn from colleagues involved in prior common course numbering efforts, including representatives from San Diego and Peralta Community College Districts and a discussion of the CCC-CCD system.  
● Define the CCN Task Force’s role in AB 1111 implementation and begin to identify appropriate elements and work streams for the  

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<th>Meeting Date</th>
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<tr>
<td>February 23, 2023</td>
<td>● Learn from colleagues involved in prior common course numbering efforts, with representatives from Los Angeles and Los Rios Community College Districts.  &lt;br&gt;● Engage in learning around four-year articulation processes.  &lt;br&gt;● Consult with RP Group on CCN Task Force research needs.</td>
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<tr>
<td>April 27, 2023</td>
<td>● Review RP Group preliminary research findings from a survey of CCC districts with CCN.  &lt;br&gt;● Clarify outcomes for implementation planning.  &lt;br&gt;● Define planning work streams for the implementation.</td>
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<td>June 22, 2023</td>
<td>● Discuss aligning course elements to CCN definition and schema.  &lt;br&gt;● Review updated research from the RP Group.  &lt;br&gt;● Discuss CCN Task Force communications.</td>
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<tr>
<td>October 18, 2023</td>
<td>● Review public draft of the CCN Task Force’s Summary Report, which includes the Recommended Implementation Plan.</td>
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<tr>
<td>December 7, 2023</td>
<td>● Finalize the CCN Task Force’s Summary Report, which includes the Recommended Implementation Plan.</td>
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### III. RECOMMENDED IMPLEMENTATION PLAN

The following is the CCN Task Force’s Recommended Implementation Plan. The CCN Task Force intends for these recommendations to guide support for systemwide implementation, while acknowledging that an implementation of this magnitude will be iterative and need flexibility to respond to lessons learned and changes in context that require adjustments in strategic direction.

#### A. Scope and Definition of Student-Facing Common Course Numbering

The CCN Task Force’s commitment to building a student-facing common course numbering (CCN) system stems from a shared belief that requiring students to navigate the current complex course structures of the CCCs, involving 115 colleges and over 40,000 general education and
transfer pathway courses, is confusing and is a structurally-induced factor contributing to inequities in student outcomes. Reducing that confusion and providing clarity to our students will be hard work, but it is necessary and it is the right thing to do. CCN is an indispensable piece of the student success and equity puzzle, and an historic opportunity for CCCs to work together and show leadership as the largest postsecondary system in the nation.

To better support students and meet the transfer-focused intent of the legislation, the CCN Task Force defines student-facing CCN as a system that ensures that all students can identify courses across the system as being comparable and therefore transferable, applicable and articulated to degree completion across the CCC and also to the California State University (CSU) and University of California (UC) systems and to independent colleges and universities in California regardless of CCC sending institution. To achieve this goal, the CCN Task Force has outlined a minimum set of elements that all courses should have in common, including a number of elements that are vital for ensuring articulation. Proposing a minimum set of elements ensures that faculty continue to have appropriate influence over the content of their courses (see E.1.d Implementation Recommendation - CCN Descriptors for additional details).

Additional necessary features of a student-facing CCN, emerging from CCN Task Force discussions, include:

- Is easily navigable and self-serviceable, so that students can use the system with confidence on their own.
- Provides students a single, transparent source of course information within the resources students are most likely to use (i.e., in the catalog and schedule of classes), inclusive of direct access to clear information about the transferability and applicability of these courses throughout California institutions.

B. Expected Outcomes of Student-Facing CCN

When done well, the CCN Task Force expects that implementation of a student-facing CCN system will achieve the following outcomes.

- For students that attend multiple CCC, lower division general education and major preparation requirements will be easily identified within the CCC as comparable in order to eliminate students unnecessarily re-taking a course when taking courses across multiple community colleges.
- The CCN Task Force intends for articulation to be improved for transfer into four-year public and independent universities as well. Current law would benefit those students that transfer within, or move around within, the CCC system, but participation by the CSU
and UC systems and independent colleges and universities is needed for CCN to benefit students transferring to and from those institutions.

- This process and statewide collaboration will:
  - Bring increased transparency and real efforts to address the structural, systemic and intersegmental barriers that students face regarding transfer and credit mobility.
  - Make progress on the following Vision for Success goals: reduce unit accumulation, improve transfer rates, and increase credential completion across CCCs by ensuring that students 1) understand how a course may or may not transfer and articulate within CCC and to UC, CSU, and independent institutions, and 2) take the courses they need to meet their educational goals regardless of the college where the courses were taken.
  - Demand attention to and provide resources for needed improvements in a number of related areas, such as upgrading and aligning technology systems and developing processes that facilitate timely sharing of information among CCCs, and across other segments of postsecondary education.

- In concert with other important student success efforts underway across the state, such as guided pathways implementation, disaggregated student outcomes data will demonstrate that equity gaps are closing and transfer student outcomes are improving.

C. Overarching Guiding Principles for the Implementation of Student-Facing CCN

The CCN Task Force expects those engaged in advancing the implementation of a student-facing CCN system to:

- Align to the CCN Task Force’s definition of a student-facing CCN system, recognize the value of the high-level outcomes as articulated by the CCN Task Force, and adhere to the CCN Task Force’s recommendations (e.g., CCN Descriptor Elements).

- Design solutions that respect faculty and college autonomy.

- Commit to a strong implementation of student-facing CCN to better support students.

- Apply principles and guidelines of Universal Design throughout this work.

- Embrace moving to a single data management system as an aspirational goal, which aligns with the CCC Chancellor’s Vision for the creation of a centralized data system that better serves both staff and students.

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D. CCN System Governance

D.1 CCN Governance Structure

The following is a recommended governance structure to support a three-year implementation process.

D.1.a California Community Colleges Chancellor’s Office

The CCCCO is responsible for system-level support and coordination, with oversight of the dedicated resources for the administration and operational aspects of implementation.

D.1.b CCN Council: Charge and Membership

At the highest level, the implementation of the new CCN system will be overseen by the CCN Council. The CCN Council’s charge is:

The CCN Council, operating as a CCCCO participatory governance group with significant engagement with intersegmental decision-makers from four-year transfer partners, will set strategic direction and goals and guide the work of the various implementation work groups. The assumption is that the CCN Council will work for approximately three years to advance strong and effective CCN implementation.

The CCN Council shall make every effort to reach consensus in decision-making. If consensus cannot be reached, then decisions shall be made by vote of the voting membership and diverse opinions will be documented.

The CCN Council will be broadly representative of the statewide stakeholders implicated in a successful CCN implementation. The full membership of the Council is still under development. CCN Council members will operate accordingly to participatory governance principles and collaborate with system stakeholder groups on accomplishing CCN implementation.

It is important to note that the work of the CCN implementation will take place in work groups (see below for more details) that will allow for—and indeed require—significant statewide representation with many opportunities for engagement and leadership.

D.1.c Steering Committee of the CCN Council: Charge and Membership

The charge of the Steering Committee is:

The Steering Committee will provide planning and facilitation for the CCN Council. The Steering Committee is responsible for effective leadership and coordination of the CCN Council, through a process of soliciting agenda items from the full CCN Council and work group leads, drafting agendas, identifying content experts and research needed, and sending agendas out in advance of CCN Council meetings for review by other members.

The Steering Committee is made up of four representatives, one each appointed by the following: CCCC0, Academic Senate for CCC (ASCCC), Chief Instructional Officers (CIO) and Chief Student Services Officers (CSSO).

D.1.d CCN Work Groups

The CCN Task Force is recommending three work groups wherein the detailed complexities of CCN implementation will be addressed. Within each of these work groups there may be additional teams/subgroups (e.g., the CCN Development Work Group will coordinate the intersegmental disciplinary teams resourced to complete the alignment of courses to the CCN definition and schema). The work groups are:

- CCN Development Work Group;
- CCN Technology & Processes Work Group; and
- CCN Communications Work Group.

The Steering Committee will appoint leads for each work group who will serve as voting members of the CCN Council.

Details on each of these work groups, including their charges, membership, guiding principles and key recommendations from the CCN Task Force for how they approach their work, follow in Section E.

D.2 Guiding Principles

The CCN Task Force expects those engaged in the CCN Council and the work groups to:

- Embrace the iterative process of this work and regularly assess progress and modify direction as needed with a goal of continuous improvement.
- Maintain the high-level proposed governance structure for a minimum of three years. In maintaining the structure, it will be important to review and assess roles and tasks annually, recommend, as appropriate, membership rotation for forward moving structure, modify or sunset working sub-groups, and engage advisory groups.
- Advocate for funding for implementation of the work. Effective implementation will require resources, particularly for: an intersegmental infrastructure for CCN; faculty descriptor and course work; staff (classified professionals, faculty, and administrators)
work to implement new processes and technology systems; and new technology purchases and implementation.

- Align the CCN implementation to other critical efforts happening statewide, such as the recommendations of the AB 928 Associate Degree for Transfer Intersegmental Implementation Committee.
- Ensure that there is a process to maintain critical data related to historical course numbering and articulation information through collaboration between key partners such as the Academic Senate for CCC (ASCCC) and the CCCCO.
- Work to embrace existing structures when appropriate and feasible, rather than creating new structures.
- Design a structure such that, as progress is made in the initial three-year implementation period, the CCN processes would run in parallel with the C-ID processes until CCN is well-established and assessment can be made to determine the opportunities for the CCN structure to complement and integrate with the C-ID structure.

E. Details on the CCN Work Groups

The CCN Task Force identified three work groups for implementation. Details on each of their charges, membership, guiding principles and implementation recommendations follow. The work groups are:

- CCN Development Work Group;
- CCN Technology & Processes Work Group; and
- CCN Communications Work Group.

E.1 CCN Development Work Group

E.1.a Charge and Membership

The charge of the CCN Development Work Group is:

- The CCN Development Work Group makes design recommendations to the CCN Council for the infrastructure and processes needed for curricular coordination to assign common course numbers. Of critical importance is that the CCN Development Work Group will coordinate, support and guide the intersegmental disciplinary teams resourced to complete the hard work of creating, adopting and implementing the CCN Descriptor. Additionally, this work group should engage stakeholders and research the impact of all CCC institutions adopting the CCN system.

Membership in the CCN Development Work Group will include stakeholders who are implicated in the effort to align courses to the CCN definition and schema, particularly CCC faculty.
(inclusive of articulation officers) and faculty and other representatives from the CSU and UC systems and from independent colleges and universities.

E.1.b Guiding Principles

The CCN Task Force calls upon those implementing the activities called for in this implementation plan to adhere to the following guiding principles:

- Ensure broad faculty participation from broad subject areas from the very beginning of the CCN work.
- Honor faculty academic freedom, as defined by American Association of University Professors (AAUP) and in Protecting Academic Freedom During a Time of Significant Change (ASCCC, 2020), is ensured by providing faculty complete autonomy in how they engage students in the delivery and assessment of the course content.
- Ensure CCN Descriptors (a foundational document that defines the common minimum elements of a course for CCN, see below for additional details) will be developed by faculty and supporting subject matter experts at the CCC system-level in collaboration with CSU, UC, and AICCU faculty, and supporting administrators. CCN Descriptors will then be adopted at the CCC system-level. Participating CSU, UC, and AICCU campuses will evaluate and determine application opportunities for each CCN Descriptor. Four-year campuses that have accepted a CCN Descriptor as sufficiently aligned with their equivalent course will honor course-to-course articulation with a course from any CCC that has been aligned with the CCN Descriptor.
- Agree that student-facing CCN will require a minimum set of elements in a Course Outline of Record (COR).
- Support the aspiration for the acceptance of the CCN Descriptors to serve as the primary pathway to articulation of individual courses.
- Support the vision that the development of CCN Descriptors supports California higher education articulation to function in a new way. As much as possible, create expectations of colleges that do not increase the amount or level of difficulty of the work already in their queue. When at all possible, create a reduction and/or streamlining of tasks and approvals.
- Establish a collaborative and innovative spirit that provides opportunity to use batch and modified processes to align courses that have already been through formal processes and that have faculty input throughout development. In cases, for example, where curriculum does not change and courses have already been approved, move to implement without going through an onerous review and approval process.
- Related to the taxonomy in particular:
  - Ensure the taxonomy immediately and clearly identifies courses that are commonly numbered.
Design a system that provides all information the course number needs to represent and let that determine the number of digits. Then work to resolve downstream impacts.

- Minimize the number of digits from the student perspective with the least impact on institutional workloads.
- Expect that students will adapt and learn the numbering system that is in place at their institution and benefit from the consistency across community colleges.

E.1.c Key Definitions Related to CCN Implementation

The following definitions were developed to establish a common understanding of key terminology in the CCN work.

- **Articulation:** The process of developing a formal, written agreement that identifies courses (or sequences of courses) on a “sending” campus that are comparable to, and acceptable in lieu of, specific courses at a “receiving” campus.\(^{18}\) Some additional notes about this definition include:
  - This definition could be “applied” to various contexts. For now, it would be applied to agreements with the CCC.
  - The term “comparable” is being used intentionally instead of “equivalent” in defining articulated courses.
  - The goal is to establish strong course-to-course articulation.

- **Comparable:** Course (as a whole) has a minimum standard in common with another course, as demonstrated by elements included in the CCN Descriptor, to the degree needed for the course to be accepted in lieu of the receiving institution’s course.
  - **Identical** (Relates to elements of a course): Exactly the same.
  - **Equivalent** (Relates to elements of a course): Hold equal weight, worth, and value but are not necessarily identically worded.

- **Transferable:** A course completed at one college or university that is then granted credit by the receiving institution upon review by that institution, be it a CCC, CSU, UC, AICCU member or any other institution of higher education.

- **Applicability:** How the units of a transferable course are applied to specific degree requirements, such as general education or major requirements, at the receiving institution.

- **Duplication:** The result of a student completing courses that are comparable or courses with similar or overlapping content that fulfill the same requirement.

The following definitions are to support consistent interpretation of this report’s content:

- **CCN Descriptors**: A CCN Descriptor is a foundational document that defines the common minimum components of a course outline of record (COR) for CCN. The CCN Descriptor Components include course number, course title, unit amounts, course description, prerequisites, course content, and student learning outcomes or objectives* (*CCCs use “objectives” rather than "student learning outcomes" because course objectives are defined as a required component of the course outline of record per Title 5 Sec. 55002 and the Program and Course Approval Handbook. It is common for four-year institutions to use the term “student learning outcomes” as equivalent to the term “objectives” used in the California Community Colleges).

- **Components of Course Outlines of Record**: For the purpose of this report and consistent with the 8th edition of the Program and Course Approval Handbook, course outlines of records (COR) will include the components required by Title 5 55002, including those components comprising a CCN Descriptor.

- **CCN-Aligned Course**: This is a COR that has been developed based on a CCN Descriptor, has been deemed consistent with the CCN Descriptor, and is thus assigned the CCN number and related articulations.

- **Curriculum**: Curriculum, broadly defined, refers to all aspects of instruction in the California Community Colleges. It is inclusive of courses, course outlines of record, educational programs, and the facilitation of learning within courses. The alignment of courses to the CCN system is a part of curriculum but not the totality.

- **Educational Program**: An educational program is a set of courses that together provide a focused field of study within a certificate or a degree.

### E.1.d Implementation Recommendation - CCN Descriptors

A CCN Descriptor is a foundational document that defines the common minimum elements of a course for CCN. The following table provides recommendations related to the expectations for alignment of CCN Descriptors.

<table>
<thead>
<tr>
<th>CCN Descriptor Elements</th>
<th>Descriptor Elements Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Number</td>
<td>Identical</td>
</tr>
<tr>
<td>Course Title</td>
<td>Identical</td>
</tr>
<tr>
<td>Unit Amount (x semester, y quarter)</td>
<td>Adheres to an established minimum</td>
</tr>
<tr>
<td>Course Description</td>
<td>Part 1: Required</td>
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<tr>
<td></td>
<td>Part 2: Optional</td>
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<tr>
<td></td>
<td>Identical</td>
</tr>
<tr>
<td></td>
<td>Expanded - local college discretion</td>
</tr>
<tr>
<td>Prerequisites</td>
<td>Identical</td>
</tr>
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</table>
### CCN Descriptor Elements

<table>
<thead>
<tr>
<th>Course Content</th>
<th>Descriptor Elements</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Required Topics</td>
<td>Identical</td>
</tr>
<tr>
<td></td>
<td>Optional Topic Expansion</td>
<td>Additional details expanded - local college discretion</td>
</tr>
<tr>
<td></td>
<td>(Optional Additional Topics - defined as part of CCN Descriptor development.)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student Learning Objectives/Outcomes</th>
<th>Descriptor Elements</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Required Objectives/Outcomes</td>
<td>Identical</td>
</tr>
<tr>
<td></td>
<td>Optional Objectives/Outcomes Expansion</td>
<td>Additional details expanded - local college discretion</td>
</tr>
<tr>
<td></td>
<td>(Optional Additional Objectives/Outcomes - defined as part of CCN Descriptor Development)</td>
<td></td>
</tr>
</tbody>
</table>

#### E.1.e Implementation Recommendation - Applicability for System-Developed CCN Descriptors

The following recommendations relate to the applicability of CCN-based courses to satisfy general education areas or to assure consistency of articulation.

**General Education Applicability**

Applicability of articulated courses to satisfy general education areas based on Cal-GETC standards.

The courses based on CCN Descriptors will be applied to identical general education areas for all students who:

- Complete courses at a CCC and transfer to another CCC;
- Complete courses at a CCC and transfer to a CSU, UC, or AICCU institution; and
- Complete courses at a CSU, UC, or AICCU institution and transfer to a CCC institution.

Identical means that the receiving institution will apply a transferring course to the same general education area as designated by the sending institution. In the event that a
receiving institution does not have the same area, another area may be selected as best aligns with Cal-GETC standards.

*Three instances for GE Applicability:

1. Full-certification of Cal-GETC results in acceptance. Note: Cal-GETC implemented fall 2025, CCN Phase I post-fall 2025.

2. No Cal-GETC certification: Individual courses with CCN Descriptors will be applied to the appropriate General Education Area based on CCC system-level approval of Cal-GETC areas.

3. No Cal-GETC certification: Courses that are not developed through the CCN process are based on institutional level course-to-course articulation, or are evaluated by the receiving institution to identify how to best serve the student. This includes courses taken at institutions outside of California, courses taken before implementation of CCN, etc.

Receiving institutions may apply a course to a different GE area for which the course satisfies upon transcript evaluation if the change benefits the student and aligns with Cal-GETC standards (for example: US History meeting Humanities and Social Science).

**Course-to-Course Articulations**

Applicability of CCN-aligned courses to course-to-course articulation.

The courses based on CCN Descriptors will be articulated identically for all students who:

- Complete courses at a CCC and transfer to another CCC;
- Complete courses at a CCC and transfer to a CSU, UC, or AICCU institution;
- Complete courses at a CSU, UC, or AICCU institution and transfer to a CCC institution.

For a course that already has a course-to-course articulation, “Identical” means for courses with CCN approval, the receiving institution will apply the CCN course-to-course articulation consistently for all students regardless of originating college.

Receiving institutions may apply an articulated CCN course to a different requirement upon transcript evaluation if the change benefits the student, does not result in duplication of courses, and does not require students to complete additional units/courses to satisfy degree requirements. This may be as a result of differing institutional degree requirements.
Course-to-Course Articulation Assumptions:
- For courses not developed through the CCN process but there is a
course-to-course articulation, then the receiving institution applies that
articulation consistently.
- For courses not developed through CCN and there is not a course-to-course
articulation in place, courses are evaluated to identify how to best serve the
student.

E.1.f Implementation Recommendation - CCN Taxonomy
This section provides recommendations for a taxonomy for CCN.

Discussion of Current Taxonomies in Course Numbering
Systems
Throughout the CCC there is significant variability of numbering systems not only across
the 116 institutions but also within a single institution. The technological data field CB01
allows for 12 characters maximum for Subject Abbreviation and Number including
spaces and dashes.\(^{19}\) Here are samples of how numbering is currently done in California’s
Community Colleges, noting that the subject number (CB01B) contained the largest
variance between the three datasets.
(N= numerical digit, A = letter, 0 = placeholder)

\[
\begin{align*}
\rightarrow NN & \rightarrow NNN.N & \rightarrow 0NA & \rightarrow 00NNA \\
\rightarrow NNA & \rightarrow NNNA & \rightarrow 0NNA & \rightarrow NNN-NNNNN \\
\rightarrow NNAA & \rightarrow NNNAA & \rightarrow 00NA & \rightarrow NAAAA \\
\rightarrow NNN & \rightarrow NNNAAA & \rightarrow 00NNA & \\
\end{align*}
\]

Considerations for CCN Taxonomy
Based on the variability of current practices, the taxonomy system should include clear
identification of the CCN component. Such an identification:
- Provides flexibility for managing local courses at individual or district institutions.
- Distinguishes the currently numbered courses from the CCN numbered courses
throughout the various systems that are in any way connected to the CCC and
their students.
- Avoids duplication of current local-numbering systems that prohibits clear
identification of current and CCN-based courses when listed in parallel.

• Provides a method for implying traditional course level (first year, second year, etc.).
• Provides a method for identification of speciality course types (such as Honors, Lab).
• Provides enough scalability to incorporate the volume of current and future courses.
• Accommodates local courses not in the CCN system with the expectation that all CCC institutions adopt holistically the CCN system.

Proposed Taxonomy

Subject
Based on 3-letter abbreviations. A system-level list of abbreviations should be standard.

Course Number (####)
0XXX - Non-baccalaureate
1XXX - 100-level course
2XXX - 200-level course
3XXX - 300-level course
4XXX - 400 level course
9XXX - Non-credit
Provides for 1000 courses at each level per discipline per identifier type. Other levels could be defined at the system-level as needs are identified.

Course Type Identifier
A system level key could be developed to define other identifiers or establish local use parameters.
C = Common Course Number

Course Speciality Identifier (&&&)
A system-level key could define options: (examples)
H = Honors Course
L = Lab only Course
C = Combined Lecture/Lab Course
R = Co-Requisite only Course
D = Co-Requisite and Credit Course Combined
Up to 3 speciality identifiers can be attached to a course, a course with no identifiers would not have fillers in those fields.

Example

MTH C1801HL

<table>
<thead>
<tr>
<th>Subject</th>
<th>MTH = Math</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Type</td>
<td>C = CCN</td>
</tr>
<tr>
<td>Course Number</td>
<td>1801 = 100-level course</td>
</tr>
<tr>
<td>Special Classifications</td>
<td>H = Honors, L = Lab only course</td>
</tr>
</tbody>
</table>
Further Collaboration

Further collaboration amongst CCC leadership and implementation teams is needed to determine:

- If all CCC courses will be housed under the CCN Taxonomy system and if so what policies, business processes, approval processes, etc. are necessary to implement one course numbering taxonomy for all courses in the system. All CCC technologies (and technologies at intersegmental institutions) that will house the common course number are able to facilitate the change and/or have resources to adapt the appropriate fields. Examples of systems include local or systemwide curriculum management systems (CMS, COCI), student information systems (SIS), Schedulers, ASSIST, C-ID, etc.
- Based on the proposed taxonomy, determine if the lead identifying letter will have a system-level directory for identifying courses and trailing letters will have a system-level key to be used for all courses.
- Once a system is developed and data is analyzed, strategies for institutions on the quarter system are needed to address both taxonomy and building of courses.

E.1.g Implementation Recommendation - Common Course Descriptor Development

Assumptions

- Intersegmental collaboration and collective decision-making are essential to this work.
- Current practices result in a natural clustering of courses based on certain commonalities:
  - Course Identification Numbering System (C-ID): Courses with the same C-ID identifier have been submitted by individual colleges and approved as aligned with the C-ID descriptor for a specific course within a discipline;
  - Cal-GETC: Courses are designated to satisfy specific areas of general education;
  - ASSIST.org: Courses with similar transferability to senior institutions can be identified;
  - California State University (CSU) and University of California (UC): CCC courses are identified as meeting the CSU Golden 4 (Writing, Critical Thinking, Public Speaking, Mathematics) and/or the UC 7-course pattern;
  - Associate Degree for Transfer (ADT): Designates a set of courses meeting major requirements; and
  - Sequencing: CCC courses that are in a sequence (example: Calculus I, II, and III).
- The ASSIST and C-ID systems contain significant course-level and articulation information between CCC and 4-year institutions.
- Faculty engagement occurs during the standard contract period (August 15-May 15).
- The convening of faculty (in-person) requires available leadership to facilitate the development process for each subject area.
Resources/funding are available for intersegmental faculty convening and maintenance of course review, including support for budget requests from four-year institutions to legislatures.

Successful intersegmental collaboration can significantly reduce the volume of course reviews by faculty from the senior institutions.

Guiding Principles

Revisions to curriculum must be faculty-driven and student-focused across all four segments.

Each approving entity works to streamline, batch approve, apply current approvals, etc.

Intersegmental collaboration is essential to modify requirements for courses based on CCN descriptors and must respect faculty engagement throughout the development process.

Processes, agreements, and descriptors are developed in consideration of relevant major preparation requirements and general education areas.

Institutions of higher learning in California honor the legacy articulations as noted in ASSIST to protect students who completed courses prior to the CCN system – especially when prior articulation differs from the CCN system. The CCN implementation is a moving-forward implementation.

Phases of Course Clusters: Developing CCN Descriptors

Phase 1: Cohort of course clusters will serve as a proof of concept, helping to vet the development processes and templates, test technology-based implementation, test-drive convening practices, and validate intersegmental collaboration. The following considerations aim to guide the creation of the cohort and implementation strategies:

− Cohort cluster should represent a minimum of one subject from each of the General Education Areas (Cal-GETC);
− Should include courses that naturally sequence together within a subject;
− Selection of subjects/courses should be based on impact data (i.e., which courses will impact the greatest number of students);
− ASSIST identification of courses can help identify local variations that all articulate the same way;
− C-ID descriptors can serve as the foundation and help to identify what is missing in the CCN Descriptors based on intersegmental discussions; and
− Should align with and be informed by the Data Reconciliation and Analysis work.

Phase 2+: Build out larger cohorts of courses based on the standards above, coupled with the Data Reconciliation and Analysis results.

− Based on data analysis, identify which courses have a high level of “commonness” already established.
− Develop a “phasing plan” that defines which subjects will fall in which phase and includes a timeline for phase process.
CCN Descriptor Development and Implementation Process

The creation, vetting, and implementation of a new system as complex as the proposed CCN system takes the commitment and determination of all stakeholders impacted by such a system. The CCN system impacts many current intersegmental practices around course articulation, advising, course content, technology databases, and communication with students just to name a sample. The CCN system, though impacting the CCC course structure and offerings, directly impacts the daily work of the UC and CSU systems as well as all the individual independent colleges and universities.

While the timeline stresses the early and regular engagement of all intersegmental stakeholders, the success of this work depends specifically on the establishment of intersegmental collaboration that has the authority and representation to change processes and practices impacting the articulation and application of transfer courses.

The three major action items for the intersegmental collaboration identified here should be priority action items that are initial first steps of the CCN Council and occur in tandem with the “proof of concept” cohort recommended above so that all stakeholders can have feedback and evidence about the changes proposed.

- Develop agreement around CSU and UC systems and/or individual institutions and AICCU institutions accepting CCN Descriptors as a basis for determining course-to-course articulations with the CCC system.
- Develop processes and standards for verification that a course meets required CCN elements, as defined by the CCN Descriptor developed through intersegmental collaboration.
- Develop processes for creating and reviewing CCN Descriptors by engaging four-year faculty early in the process. Evaluate and adjust processes simultaneously from proof of concept to successful implementation.

The success of intersegmental work in developing and implementing a CCN Descriptor based system includes:

- Intersegmental development – A CCN Descriptor is created, vetted, and articulated by faculty from all four segments.
- Intersegmental agreement that the descriptor is commonly numbered and that colleges can then pull the template for the CCN Descriptor and submit a COR against the CCN Descriptor for designation of a common course number.
- College applies for a common course numbering designator that results in seamless transferability and applicability of the course based on the descriptor articulation.

The major processes included in the CCN Descriptor Development and Implementation Processes are (additional details are provided in Appendix A):

- Establishment of Intersegmental Collaboration
- CCN Descriptor Preparation and Development
- Descriptor Vetting, Cal-GETC, and Articulation
The CCN Task Force recommends the selection of one course from each of the Golden 4 areas and/or one course from each general education area to serve as the initial “proof of concept” cohort. This cohort of faculty will work in collaboration with intersegmental leadership teams to inform the creation of a set of collaborative processes (as outlined in Appendix A). The ASCCC can provide feedback related to subjects within the Golden 4 that have faculty work groups primed and eager to engage in this work.

E.2 CCN Technology and Processes Work Group

E.2.a Charge and Membership

The charge of the CCN Technology and Processes Work Group is:

The CCN Technology and Processes Work Group guides and supports the design and implementation of the technology and related processes and supports needed for CCN technology implementation. This group advises and monitors vendor work at the system and campus levels to ensure: quality alignment to the scope of work, delivery of support to all institutions, changes do not impact current student processes, and contracts are supported. Additionally, this group collaborates with campus, district, and regional stakeholders to support efforts in CCN integration.

Membership in the CCN Technology and Processes Work Group will include stakeholders who are implicated in the effort to design and implement technology system requirements for supporting the CCN implementation, such as CCCCO Equitable Student Learning, Experience and Impact Office (ESLEI), Data & Research, and IT Leads; ASSIST Director and staff; Course Identification Numbering System (C-ID) Specialist; CCC technical staff (representatives from a variety of institutional sizes, demographics, etc.); and vendor representatives as appropriate.

E.2.b Guiding Principles for the CCN Technology and Processes Work Group

The CCN Task Force calls upon those implementing the activities called for in this implementation plan to adhere to the following guiding principles:

- Strive for digital equity in any technology and implementation approach.
  - Digital equity exists when the technology infrastructure, tools, and resources across all campuses provide a high-quality, secure, and seamless online experience for students, faculty, and staff regardless of campus size or location.
- Center the high-level outcomes as articulated by the CCN Task Force.
When implementing new technology systems, seek to eliminate existing costs and streamline existing systems.

When selecting a CMS or any vendor, strive to select a system where college/district/state processes drive the software instead of the software driving the processes."

E.2.c Implementation Recommendations - Data Reconciliation

Assumptions

When developing the considerations for this area, the CCN Task Force held the following assumptions related to data reconciliation:

- The CCN work and data reconciliation work can be completed in parallel. The data reconciliation work will not stall or slow the CCN processes and timelines. Work may continue, for example, on convening faculty groups for a cluster of courses (e.g., courses designated to satisfy specific areas of general education for Cal-GETC or courses already aligned with the same C-ID identifier).

- The data reconciliation work will not impact the current articulation of courses prior to CCN being implemented for that course.

- The data reconciliation work will focus on currently active courses and not those that are expired.

- The end result of data clean-up is the addition of a unique identifier and the consistency in the four data fields housing Course Title, Course/Subject Number, Course/Subject Name, and Units.

- There is a shared understanding that any changes to these four fields are corrections, and changing these values only for the purpose of consistency does not change the status of any course in any application.

- ASSIST commits to processing corrections to the four shared fields as a batch/migration without further effort required by the colleges.

- COCI and C-ID will coordinate with ASSIST to align the timing for processing the corrections.

- Resources and funding are available to support the following implementation strategies:
  - Data vendor for reconciliation and analysis of course content.
  - Funding for merging of COCI and C-ID.
  - API programmers for system and local work.
  - Data vendor/programmers to develop system-level repository.
  - Funding for adaptations in ASSIST.
  - Training support for new repositories and systems.
Data Reconciliation, Clean-up, and Analysis

Securing a data vendor for a one-time, centralized reconciliation effort has both immediate and long-term benefits for students, faculty and staff. Data reconciliation results in the responses for each of the four shared elements (Course Title, Course/Subject Number, Course/Subject Name and Units) being reported the same in every “primary source” application and allows the courses to be linked at the database level.

Impact of Data Reconciliation and Clean-Up

- CCN elements live in multiple “primary source” applications. This means that the data fields in COCI needed for CCN Descriptor work cannot be collected to pair with the C-ID fields. In order to create a CCN system, a unique identifier is necessary (like the course control number, which is used for management information systems (MIS) reporting) across all 3 systems (ASSIST, COCI, C-ID).
- Analyzing data at the college level provides institutions with information about how course elements align to the CCN norm. This will reduce workloads when implementation begins.

Data Structure within the Current “Primary Source” Applications

The required common CCN Descriptor elements* indicated below are housed across multiple systems or are locked data in PDF format. In order to complete the development of the CCN Descriptors and create a Common Course Outline of Record (CCOR) template based on the CCN Descriptors, these elements must be consistent across the technological systems and be accessible collectively in structured data format. Additional data elements currently housed across the three systems may play an important role in implementation work.

<table>
<thead>
<tr>
<th>Shared Elements</th>
<th>ASSIST</th>
<th>COCI</th>
<th>C-ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>College</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>*Course Title</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>*Dept Name (CB01A)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>*Dept Number (CB01B)</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>*Min Units (CB07)</td>
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<td>X</td>
</tr>
<tr>
<td>Max Units (CB06)</td>
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<td>X</td>
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</tr>
<tr>
<td>Unique Elements</td>
<td>ASSIST</td>
<td>COCI</td>
<td>C-ID</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>--------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>ETS Code</td>
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</tr>
<tr>
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<td>End Term</td>
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<td>C-ID Number</td>
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<td>C-ID Descriptor</td>
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<td>COR Effective Term</td>
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</tr>
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<td>*Course Prerequisites</td>
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<td>*Course Content - Topics</td>
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<td></td>
<td>Locked Data in C-ID and COCI COR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Student Learning Objectives/Outcomes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Locked Data in C-ID and COCI COR</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Required common CCN Descriptor elements

**Systemic Challenges**

- There was no standardization of College Name between the available reports.
- There was no unique ID for each course to automate matches between the reports.
- Headings were different within the reports for common data elements (e.g., Dept Name, Subject Name, Subject Name - CB01A)
- IGETC and CSU GE mappings are 1 subject area per row.
- Dept Name (CB01A) values varied widely within and between the colleges.
- Dept Number (CB01B) contained the largest variance between the three datasets.
Data Reconciliation and Analysis: Potential Deliverables

**Data Reconciliation**

- Provide a documented plan that describes the changes identified as they relate to articulation agreements.
- Create a temporary database (repository) for colleges to reconcile and consolidate the data into a master data set.
Run advanced lookups to find Exact Matches, Probable Matches, Possible Matches, and No Matches Found. Document and categorize these for sorting.

Provide an organized file to institutions that identify/provide the correct version of information.

Prepare a summative report of data reconciliation by college, accuracy of fields by system, duration of effort, etc.

Sends vendors of “primary systems” clean data sets that include Course Control Number as the shared unique ID; test migration; run migration in production.

Result: systems updated; data standardization and courses linked by the Course Control Number.

Analysis

Document how to access all of the data identified by the CCN Task Force as needed for the minimum set of elements to be included in Course Outlines of Record.

Provide summative data of commonalities identified in courses. Grouped by descriptor elements. This information will be used to help inform the work of the work groups to define standardization of CCN elements and prioritize work.

Starting CCN Descriptor Work Prior to Data Reconciliation and Clean-Up

A set of courses functioning as a proof of concept will allow building the CCN Descriptors, test templates and data support, and iron out any needed processes. Some data reconciliation and clean up work can occur in parallel with the proof of concept. As the work group identifies the small subset of courses with more consistent language, they will be able to do so without data reconciliation. Aligning courses without common nomenclature will benefit from a data summary. This will avoid potential biases from the work group, who may not be aware of what nomenclature or CCN elements are already common across the system.

E.2.c Implementation Recommendations - New Technology

Assumptions

When developing the considerations for this area, the CCN Task Force held the following assumptions related to new technology:

- There is desire amongst the segments to apply technology as a solution for streamlining and storing the CCN work.

- Without a repository for which to identify all CCN elements, colleges may not succeed in having all courses matching each other.
● A common repository would help to align the CCN elements, including those requiring identical or equivalent elements, across the system for existing and for newly developed courses.

● It is important to reconcile all technological solutions being used in work such as AB 928, Cal-GETC, and AB 1111 to assure that changes made for one scope of work still accommodates requirements of other scopes.

● COCI and C-ID have existing system-level repositories for curriculum approvals and articulation.
  o Combining these into a single, comprehensive repository with modules to support varying workflows not only reduces the data entry burden with colleges but it also would extend easier to add workflows for submission and approvals associated with CCN designation.
  o COCI is already integrated with MIS.

● CVC-OEI (Online Exchange Interface) needs to be aligned with AB 1111. A statement of work should be developed to make this effort inclusive. This will require working with stakeholders to ensure both systems function correctly with each other.
  o The CVC is already pulling some data from ASSIST.org. This work should continue with any CCN database.
  o The ASSIST mapping is displayed to the student when they are reviewing the course details page. (Example below.)
Streamlining Data Management - CCN Data Warehouse

The efficiency and success of the CCN work depends on the ability to streamline processes and/or technological solutions. Merging of the COCI and C-ID data repositories into a single system-level curriculum and articulation application results in a module-based platform with specialist permissions, access walls, and respect for CCCCO curriculum review, faculty review in C-ID, and local data processes. This requires working with existing stakeholders to ensure necessary functions are not lost in the merger.

A single system-level application results in:

- Single and consistent data-entry for each of the CCN descriptors.
- Established dedicated space for work streams/permissions, which maintain currently accepted processes completed by statewide curriculum and articulation personnel.
- A significant increase in course data available for research that is currently fragmented.
- Development of Application Programming Interface's (API) and support for local systems to resolve databases currently requiring manual entry.

Successful integration of a single system-level data repository requires:

- An agreement with a single software company to develop the repository.
- Systemic influences and sponsorship of local CMS/SIS vendors required work to ensure all colleges have equitable access and opportunity to participate.
- Paying for consultants to develop local APIs from this curriculum software to their SIS.
- An aggressive timeline for application development, testing, and implementation of repository.
- An equally aggressive timeline for implementing an API direct connect at the local level in all CCCs.

Future considerations:

- Colleges/districts opting out of the new system would be required to manually enter their curriculum using the repository. This creates a need to develop a way for them to submit their curriculum through the repository for modifications to existing curriculum or new classes.
Streamlining Data Management - Linking Repository to Local Curriculum Software

Secure programmers to write customized APIs to connect the system repository to local curriculum software (CMS, SIS) and provide staff support and financial support to institutional level technology staff to complete the work, respect local processes and reduce entry.

Similarly, provide intersegmental solutions through collaboration with ASSIST to develop an API to solve manual entry by pulling and pushing data from the repository into the ASSIST system, respecting the UC and CSU perspectives and roles in the ASSIST program.

Options for automating the repository into local SIS systems. There are multiple curriculum software programs (e.g., eLumen, CourseLeaf, CourseDog, CurricUNET, etc); and multiple SIS systems (e.g., Banner, PeopleSoft, Colleague). Each curriculum software will house local courses, in addition to the courses impacted by AB 1111, which means a statewide system may encounter issues not identifiable at this time. Once there is communication between the curriculum software and the SIS, it must also feed into the CMS. Most colleges are now on Canvas, which will help that process.

Integrated System-Level Application with API Connections to Local System

College Level Considerations

- Manual data entry significantly reduced.
- Complete alignment of data in local applications and system-level repository.
- College staff would continue to control their data in the repository by initiating data transfer through lookup tools or similar processes.

System-level Considerations

- Leverage CCCC0 and ASCCC to work directly with CMS vendors to drive schedule and scope of API.
- Testing and implementation is coordinated at the vendor level.
- Need to determine how much customization exists to local off the shelf systems and align resources to support college specific APIs.
- Colleges using homegrown systems may need an alternate connection option and/or additional resources to implement.

Successful integration of APIs requires dedicated resources.

- This is the least expensive and time effective method.
It would likely take an average of 40 IT hours to write an API to an existing
curriculum software. For colleges without an API from their curriculum software
to their SIS, this would also likely be written.

Timeline: 1 year for colleges with existing Curriculum-to-SIS APIs, and 3 years for
colleges requiring additional technology.

Streamlining Data Management - CCN Descriptors - Verifying Identical vs Equivalent for Articulation

The CCN Descriptors, having been vetted with intersegmental faculty from CCCs, CSUs, UCs, and members of AICCU, contain elements that are required to be identical for any courses based on a particular CCN Descriptor. The implementation of technology solutions can verify courses that are identical to CCN Descriptors and which courses need “human” review as part of the approval process at the CCC and UC/CSU/AICCU-institution levels.

Developing a technology solution for submitting a Common Course Outline of Record (CCOR) using a template based on structured data will result in:

- The accessibility of the course data that is currently locked in PDF/text fields.
- The development of a technology-assisted review process that will create greater efficiency of process and better use of faculty reviewers’ time.
- An opportunity to intersegmentally certify courses as identical to the CCN Descriptors and to flag courses needing manual review.
- An opportunity to streamline processes and provide electronic approvals such as a Chancellor’s Letter at the Descriptor level that is provided upon submission and verification of a COR based on that Descriptor.

Developing a system of electronic adoption

- Building a Common Course of Record (CCOR) outline through the use of a structured data CCOR template
  - College teams create courses by selecting appropriate descriptors for CCN courses or building content for local courses.
  - Each CCN Descriptor is housed in individual fields and set for submission against the minimum requirement for that descriptor. Additional fields are added for optional or variable content.
  - The CCOR is electronically submitted after appropriate local approvals to appropriate administrative sectors for approval (COCI, C-ID, ASSIST, etc.)
- Building an automated certification system
  - System checks for level of variance between CCOR and CCN Descriptors and flags CCOR for manual review if the course exceeds the established
If the CCOR meets established parameters, the course is certified and approved.

- Data repository would house all the elements in designated fields providing opportunities for increased integration of data.
- The data repository will provide public-facing access to CCORs.

### E.2.d Implementation Recommendations - Structural Considerations for CCN Taxonomy

The change in the parameters and use of any data field requires careful scrutiny related to its impact on historical data as well as the capabilities for current systems to handle the changes. From the technical perspective, the development of a taxonomy system should:

- Not exceed the CB01 field parameters of 12 characters maximum for Subject Abbreviation and Number including space, dashes, etc.
- Retain CB01 as the field for subject course and number while creating CB2x to flag the course with a CCN indicator.
- Locally handle showing of two different numbers in catalog, etc.
- Engage early with big SIS vendors and built-in MIS reporting support to update with changes.
- Result in easier access to MIS data from the research perspective.
- Recognize that altering the course numbering structure impacts not only technical systems but also program updates when CCN courses are adopted and COCI program update processes. The impact on workload will also be a key factor in successful transition.

### E.3 CCN Communication Work Group

**Note:** A key focus of the October 18, 2023 CCN Task Force Meeting will be to build out this section.

#### E.3.a Charge and Membership

The charge of the CCN Communications Work Group is:

- The CCN Communications Work Group ensures consistent and relevant communication:
  - To include all the stakeholders implicated in the implementation of CCN field, including students, faculty and college leadership.
  - And across the CCN Council, its Steering Committee, and the work groups are all operational, advisory, and steering groups.

Membership in the CCN Communications Work Group will include stakeholders who can design and implement strong communications in support of an effective CCN implementation, inclusive of students; CCCCO communications professionals; CCC communications staff
E.3.b Guiding Principles

The CCN Task Force calls upon those implementing the activities called for in this implementation plan to adhere to the following guiding principles:

- Honor the CCN Task Force's intention that the new CCN system will be presented consistently by each college as a single, transparent source of course information, and will be accessible within the resources students are most likely to use (i.e., in the catalog and schedule of classes);
- Seek to anticipate challenges and alleviate any stress of a new system implementation by communicating clearly and proactively;
- Center the student experience in all CCN communications, ensuring that the transition to the new CCN system is smooth and students have clarity on how to use the new system;
- Ensure that communications support students who took courses before, during, and after the implementation of the new CCN system;
- Consider the implications of the new CCN system broadly, taking into account the CCN Task Force's intention that the CCN system will improve course articulation both within the CCCs and across four-year transfer partners.

E.3.c Implementation Recommendations - Statewide Communications Work Plan

The first priority of the CCN Communications Work Group will be to design a comprehensive statewide communications plan. This work plan should be phased and attend to at least the following:

- Provide guidance to colleges about how to prepare for the coming changes, when they will occur, and how stakeholders can collaborate to streamline efforts and maximize a smooth transition for all stakeholders, particularly students;
- Communicate to colleges the expectation that the new CCN system will be presented consistently by each college as a single, transparent source of course information, and will be accessible within the resources students are most likely to use (i.e., in the catalog and schedule of classes);
- Provide guidance to students about the timeline and plan for the coming CCN system;
- Ensure students experience the CCN implementation as a smooth migration that is accurate and supportive of their success.
- Communicate with four-year partners (and related resources such as Assist.org) about the changes coming and what it might mean for their technology systems;
- Support the CCN Council and working groups on communication-related activities;
- Lead purposeful dissemination of information and gathering of feedback.
Communicate
Initiate
Collaboration
Share
Assess

and this by complexity December illustrates completed scale of evident it is that and 2023, Task Force implementation plan will the The recommended CCN system CCN of design articulation/transferability and with and the courses CCN to changes will potentially existing where disrupt course CCC and data-informed processes; addressing expedite operational identifying and decisions and curriculum technology processes); catalog will solutions increase structure ongoing course and of local processes for (considerate alignment assessment number intersegmental statewide developing same; steering and a the operational CCN establishing for what must course elements be identical and/or equivalent for a course to be numbered the same; developing a statewide intersegmental CCN steering and operational structure for ongoing CCN course assessment and alignment processes (considerate of local curriculum and catalog processes); determining technology solutions that will increase data-informed decisions and expedite operational processes; and identifying and addressing where CCN changes to CCC courses will potentially disrupt existing course articulation/transferability with the CSU and UC systems and AICCU institutions.

The CCN Task Force design of the CCN system recommended implementation plan will be completed by December 2023, and it is evident that illustrates the complexity and scale of this
endeavor will necessitates additional time beyond June 2024 to meet the intent of the legislation. It has therefore been proposed that the CCN system implementation deadline be extended to fall 2027, with a rolling implementation toward full scale beginning in spring 2024.

The detailed and aggressive timeline outlined below establishes milestones that indicate how the extension would allow for continuous progress to be achieved through applying the new CCN system to groups of courses in a scheduled cycle (commencing 2024), while continuing to build toward a sustainable CCN infrastructure with CSU, UC, and AICCU (all three currently not mandated to participate), which is necessary to ensure that all existing and future courses going through the CCN process are accepted and approved for transfer across segments.

[Timeline Goes Here]

May need to be updated as the CCN Task Force continues its work through December 2023.

**V. CONCLUSION**

(May need to be updated as the CCN Task Force continues its work through December 2023.)

The CCN Task Force is pleased to present this Summary Report, inclusive of a Recommended Implementation Plan. The CCN Task Force represents a highly collaborative group that worked diligently over approximately 16 months and engaged and honored the expertise of faculty, staff, students, administrators, trustees, and representatives of the CCC’s four-year transfer partners from AICCU, UC and CSU. We feel confident that the implementation plan described in this Summary Report can and will result in a CCN system that has the potential to greatly benefit students and meet the stated intent of the AB 1111 legislation, which is to streamline transfer from two- to four-year postsecondary educational institutions and reduce excess unit accumulation.

Time is of the essence. The CCC’s students need the clarity CCN will provide, and the work ahead will be challenging, but rewarding. The CCN Task Force looks forward to the implementation effort and encourages all necessary stakeholders to move forward quickly, ensure the funding and resources are available for an implementation of this magnitude, and center the equitable success of our students.
These diagrams and tables are designed to offer initial sequential processes for the development and implementation of CCN Descriptors, courses, and articulations. A timeline for consideration is included as well as opportunities and impacts of current practices to the meeting of that timeline.

Establishment of Intersegmental Collaboration

- Develop processes and standards for verification that a course meets the required CCN elements, as defined by the CCN descriptor developed through intersegmental collaboration.
- Develop agreement around CSU and UC systems and/or individual institutions and AICCU institutions accepting CCN descriptors as a basis for determining course-to-course articulations for the CCC system.
- Develop processes for creating and reviewing descriptors by engaging 4-year faculty early in the process. Evaluate and adjust processes simultaneously from proof of concept to successful implementation.
<table>
<thead>
<tr>
<th>Target Process Timeline</th>
<th>● 1 year in parallel with CCN Descriptor Development (Proof of Concept Cohort)</th>
</tr>
</thead>
</table>
| Timeline Considerations | ● Engagements of intersegmental partners represent multiple stakeholders needing to approve the adjustment of processes or agreements as requested/anticipated for CCN alignment and articulation.  
● Adaptations to current practices of course-to-course articulations to support CCN recommendations.  
● For GE, it’s necessary from the beginning to make sure descriptors will meet approval or certification standards for relevant CSU GE Breadth, Golden 4, Cal-GETC, and UC eligibility areas.  
● Identifying/recruiting participating faculty and system representatives from all 4 systems if involved in this initial work.  
● Funding for faculty participation and staff from all segments to manage and coordinate this system-wide and student-centered redesign.  
● Coordinating across the individual institutions including all public and independent entities. |

CCN Descriptor Preparation and Development / Descriptor Vetting, Cal-GETC, and Articulation

- CCN Phase 1 courses identified and available data collected for teams.  
- Use ASSIST to pull courses with common articulation and C-ID to pull courses with common alignment.  
- Intersegmental faculty and AO representatives, all systems level reps, ICAS and Cal-GETC reps recruited and appointed.  
- Using C-ID descriptor elements as foundational content, complete a review of UCTCA and Cal-GETC standards to provide guidance to CCN development teams.  
- Convening of faculty to commence development of descriptor elements.
## Target Process Timeline

<table>
<thead>
<tr>
<th>Timeline Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1 year for Development, Vetting, and GE/Articulation (Initially in parallel with Intersegmental Collaboration Established)</strong></td>
</tr>
<tr>
<td>Recruiting participating faculty from all 4 systems.</td>
</tr>
<tr>
<td>Funding (covering time and travel) for all participating faculty and/or staff at all stages of development.</td>
</tr>
<tr>
<td>Facilitating large convenings requires a significant number of staff members. (Note: Larger convening in summer perhaps before/after curriculum institutes with summer stipends for small appointed teams may help with timeline. Discipline input groups in semester for broader feedback (volunteer). Provide a clear message of expectations and commitment in recruitment.)</td>
</tr>
<tr>
<td>Meeting timeline may depend on the number of courses selected for the phase cohort.</td>
</tr>
<tr>
<td>Ongoing participation of faculty teams. (Attrition/retention of teams).</td>
</tr>
<tr>
<td>Presence of university level agreement to align articulation and general education using CCN descriptors (change to current practices).</td>
</tr>
</tbody>
</table>
Publishing of CCN Descriptors

- CCN Descriptors are approved and published to the Descriptor repository.
- Technology-based descriptor templates are used by college faculty to create CCN-aligned course outlines of record.

Target Process Timeline

- 3 months (Technology-based solutions at system-level.)

Timeline Considerations

- Technology based repository complete and ready for descriptor upload. COR template available for COR creation.

CCC Local Curriculum Processing and CCCCCO Call for Submission

- New CCC courses and CCC course revisions vetted by local curriculum committees in accordance with local curriculum approval processes.
- Course submitted to CCCCCO for chaptering and attainment of control number.
- Course is approved or course not approved and revisions needed.
### Target Process Timeline

- **3-6 months**

### Timeline Considerations

- Length of time for curriculum changes at each campus.
- The existence of current district-level CCN systems and the expectation for those systems to align with the CCC-wide CCN.
- Prior approval of the course by UC Transfer Course Agreements (UCTCA) is required for submission for consideration for Cal-GETC Area(s).

---

### Local CCN Course Implementation and Program Alignment

- CCC curricula (new courses and course revisions) are vetted by local curriculum committees in accordance with local curriculum approval processes.
- Resubmit curricular program to CCCCO (COCI).
- Establish course in curriculum management system (CMS) and other local systems.
- Process catalog and course scheduling updates.

### Target Process Timeline

- **3-6 months (overlap with Call for Submission)**

### Timeline Considerations

- Appropriate level of staffing to make numerous updates in the first phases of implementation.
- Review/revision of CCCCO processes.
- Modifications to some current catalog and class scheduling timelines to meet this timeline.
### Course Articulation Verification and ADT Revision Submission

- Based on intersegmentally developed processes and standards, CCC courses aligned with a CCN Descriptor are submitted to CSU, UC, and AICCU for articulation verification.
- The intersegmental faculty teams determine final articulation of CCN courses. (Supported by a technology-generated report verifying CCN COR alignment to the CCN Descriptor Elements.)
- Resubmit program revisions to ADT.

### Target Process Timeline

<table>
<thead>
<tr>
<th>Timeline Considerations</th>
<th>3-6 months</th>
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<tbody>
<tr>
<td>Review/revision of process for (re)submission of ADTs. Recommend batch processing for college submissions with no or minimal COR changes except for what is necessary for CCN descriptor alignment. Consideration of alternative processing such as using the local approval when no content changes in course are made.</td>
<td></td>
</tr>
<tr>
<td>Ongoing availability and support of faculty teams.</td>
<td></td>
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</table>
### CCN Course Student-Facing

- CCN based course in student catalog
- CCN based courses in course scheduler
- Articulations based on new CCN published

<table>
<thead>
<tr>
<th>Target Process Timeline</th>
<th>6 months (overlap with Program Submission)</th>
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<tbody>
<tr>
<td>Timeline Considerations</td>
<td>Modifications to some current catalog and class scheduling timelines to meet this timeline. Current catalog and class scheduling timelines at some colleges would have to be modified to meet this timeline.</td>
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