# 2025 Common Course Numbering Articulation Policy (CCNAP)

# CH/CHE/CHEM 104Z Introduction to Chemistry

2025 CCN Chemistry Subcommittee



**Written by Jane Denison-Furness (HECC)**

Cochairs Kenneth Friedrich (PCC) and Christopher Walsh (EOU)

October 23, 2025

**715-025-0070 institutions that do not offer an equivalent of this course are not required to participate in the CCNAP.

# Approved Course Information

**Course Subject Code and Number:** CH/CHE/CHEM 104Z

**Course Title:** Introduction to Chemistry

**Course Credits:** 5 for lecture and lab

**Course Description:** Introduces principles of general chemistry including atoms, chemical formulas and equations, bonding, stoichiometry, acid/base chemistry, solutions, and unit conversion calculations. Does not equal a general chemistry course sequence. CH/CHE/CHEM 104Z is the lecture component; CH/CHE/CHEM 124Z is the laboratory component.

**Course Learning Outcomes:**

1. Describe physical and chemical properties and the phases and classifications of matter.
2. Apply ionic and covalent bonding theories including Lewis structures, molecular structure, and polarity.
3. Quantify the composition of substances and solutions using molar mass and molarity.
4. Name a variety of elements, ions, ionic compounds, and covalent compounds.
5. Write and balance chemical reactions and solve stoichiometry calculations.
6. Identify types of intermolecular forces and apply them to physical properties of gases, liquids and solutions.
7. Interpret the behavior and relative strengths of acids, bases, and buffers.

**Teach Out Plan:** None (not a sequential course)

**Required to begin appearing in this catalog year:** 2026-27



# Maintenance Considerations

**OAR 715-025-0110**: "The Transfer Council shall ensure the ongoing alignment of courses subject to Common Course Numbering Articulation Policies (CCNAP) between institutions."

The CCN Chemistry Subcommittee recommends this course to be examined for ongoing alignment between institutions using the following Maintenance and Review Plan:

1. Annual CCN Chemistry Subcommittee check-ins beginning in **Winter 2028** to gather qualitative and/or quantitative data on faculty and student experiences, make requests for institutional

and statewide data, discuss challenges, and raise concerns to review the transfer effectiveness of the CCN CH/CHE/CHEM 104Z, CH/CHE/CHEM 124Z, CH/CHE/CHEM 112Z & CH/CHE/CHEM 150Z aligned courses. The scope of annual check-ins will focus on the statewide and collaborative nature of this work to facilitate inclusive and equitable conversations and to identify potential issues that may require future modifications of the CCN recommendations or framework every third year, **starting in 2031**.

2. Triennial CCN Chemistry Subcommittee meetings beginning in **Winter 2031** with the purpose of analyzing qualitative and quantitative data, drafting and approving modifications to the CCN Chemistry Recommendations, and problem-solving implementation issues to improve the effectiveness, inclusiveness, equity, and implementation of the recommendations and framework.

### Items for consideration when a course is reviewed as part of the maintenance and review schedule:

None.

## Institutional Changes in Credits after Alignment



In the table below, list the course whose course description and course learning outcomes aligned most closely to the course in this CCNAP prior to CCN alignment. Only list institutions for which there was a change in total course credits. For separate lecture and lab courses, count the total number of credits for both, not the credits for individual lecture and lab courses. An example has been included in the table below.

| Institution | Course Number and Title | Credits before alignment | Credits after alignment | Change in credits (e.g., +1 credit or - 1 credit) |
|---|---|---|---|---|
| *TVCC & UCC* | *CH/CHE/CHEM 104Z Introduction to Chemistry* | *4* | *5* | *+ 1* |
| *EOU, OIT, SOU, WOU* | *CH/CHE/CHEM 104Z Introduction to Chemistry* | *4* | *5* | *+ 1* |

From the CCN Chemistry Subcommittee Members:

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|---|---|
| Anna Olivieri | SOU |
| Ben Frankamp | Chemeketa |
| Beth Manhat | LBCC |
| Carol Higginbotham | COCC |
| Christopher Walsh | EOU |
| Eden Francis | Clackamas |
| Eric Sheagley | PSU |
| Jessica Wittman | MHCC |
| Joseph Villa | Umpqua |
| Ken Usher | OIT |
| Kenneth Friedrich | PCC |
| Margaret Haak | OSU |
| Michael Koscho | U of O |
| Patricia Flatt | WOU |
| Paula Weiss | OSU |
| Sekhar Kunapareddy | RCC |



# Overview

Each year, the Transfer Council (TC), in collaboration with the Higher Education Coordinating Commission (HECC), approves a plan for the development of Common Course Numbering Articulation Policies (CCNAPs) by selecting a set number of introductory or lower-division, highly transferred courses that would benefit from standardized content and numbering. Once courses are selected, the TC appoints a faculty subcommittee comprising representation from faculty. The selection rule (OAR 715-025-0065) is part of Oregon's ongoing effort to enhance credit transferability and facilitate degree progress for students across institutions.

Each faculty subcommittee appointed by TC collaborates to create CCNAP recommendations for all components of each selected course as outlined in the CCN Framework, ensuring that content aligns with educational goals and transfer objectives. Each finalized CCNAP ensures that course content, competencies, and numbering are consistent statewide, providing students with a seamless credit transfer experience while maintaining academic integrity and coherence across

institutions.

This document serves as a statewide policy guiding the development and alignment of Common Course Numbering Articulation Policies (CCNAPs) for **CH/CHE/CHEM 104Z Introduction to Chemistry** at Oregon's participating post-secondary institutions. CCNAPs ensure that courses with similar content and competencies are standardized in terms of course number, subject code, title, course description, credits, course learning outcomes, and the Z-designator, located in the last place of the course number field.

The following information represents the recommendation of the **2025 CCN Chemistry Subcommittee's** alignment work and discussions for **CH/CHE/CHEM 104Z Introduction to Chemistry** as well as the information approved by the Transfer Council on November 20, 2025.

## Common Course Numbering

SB 233 (2021) established the common course numbering (CCN) system in Oregon. This includes but is not limited to accepting a transfer of academic credit for each course that is subject to a CCNAP as if the academic credit was earned at the institution that is accepting the transfer of academic credit with respect to:

- The total amount of academic credit awarded;
- Satisfying general education requirements for graduation; and
- Satisfying any requirements for a major in a baccalaureate or associate degree program.

Additionally, public post-secondary institutions must recognize and abide by all rights and guarantees outlined in Oregon Revised Statute (ORS) 350.423 and Oregon Administrative Rules (OAR) 715-025-0065 through 0115.

Finally, an institution may not offer a course similar in course description and course learning outcomes to a course with a CCNAP. Courses that are deemed similar (i.e., articulated as equivalent upon transfer) must adopt the relevant CCNAP.

## Transfer Council Decisions

The Transfer Council unanimously voted to recommend to institutions that due to changes in course information under OAR 715-025- 0065 through 0115, colleges and universities should

ensure students' academic progress is not disrupted. Courses completed before CCN changes should count toward graduation, even if requirements shift. Holding students harmless means honoring their efforts, supporting them through transitions, and keeping learning— not compliance—the central focus. CCN course information should be adopted as written without exception. For more detailed information on what can be added to the course description and course learning outcomes, see the CCN Framework below. And for more general information, see CCN Reports and Memos on the Educator Resources—Common Course Numbering webpage.

## Common Course Numbering Framework

The Common Course Numbering (CCN) Framework was developed in 2022 by the Systems and Operations Subcommittee and was officially approved by the Transfer Council October 21, 2022. Pursuant to Senate Bill 233 (2021) and ORS 350.423, the Framework establishes requirements for aligning key course elements including subject/subject code and course number, credits, course description, title, and course learning outcomes. The CCN Framework was subsequently updated with clarifying examples and implementation guidance and approved by the Transfer Council at its April 18, 2024 meeting. The following framework provides further clarification and clarity, based on feedback provided by institutions during the first four years of CCN.



| Course Element | Implementation Guidance |
|---|---|
| Course Designator | There must be a common course designator, and it will be a capital Z in the final position in the course number field, with no spaces (e.g., MATH 111Z or MATH 111HZ). |
| Subject | Subjects must match. |
| Subject Code (Prefix) | Subject codes must match. Existing subject codes may be retained if they are abbreviated differently (e.g., HIST and HST are both allowed). |
| Course Number | The course number must match (e.g., 111Z). |
| Course Credit | Course credits must match. Course credits for separate lecture/lab courses may be approved as a total number of credits for both lecture and lab. As per the CCN OARs (715-025-0075), "any course for which a CCNAP is developed must be the same number of credits at each institution. If a CCNAP is developed that is greater than the least number of credits currently awarded for the course governed by the proposed CCNAP, the subcommittee must provide justification to the Council so that it can consider the issue at the time of adoption." |
| Course Description | Course descriptions must match. Institutions may add<br>• Course requisites/pre-requisites |

| Course Element | Implementation Guidance |
|---|---|
| | • Information linking a course to a previous iteration of the course<br>**Example:** Approved course description with allowed additions (showing added course requisites or what is required to enroll in the course and prerequisites, **in italics**).<br>WR 121Z engages students in the study and practice of critical thinking, reading, and writing. The course focuses on analyzing and composing across varied rhetorical situations and in multiple genres. Students will apply key rhetorical concepts flexibly and collaboratively throughout their writing and inquiry processes.<br>*Previously WR 121. Prereq: SAT Reading or SAT Writing score below 37, or ACT verbal score below 32, or equivalent.* |
| Course Learning Outcomes | Course learning outcomes must match. Institutions may add<br>• One additional local course learning outcome.<br>• Additional learning outcomes specific to categorical institutional requirements such as information literacy or general education. These will not count as the "one additional…outcome," above.<br>**Example:** Approved course learning outcomes with allowed additions (showing the addition of one local course learning outcome and allowed categorical institutional requirements for WR 121Z, **in italics**).<br>1. Apply rhetorical concepts through analyzing and composing a variety of texts; *(WR1)(WR3)(CCN)*<br>2. Engage texts critically, ethically, and strategically to support writing goals; *(WR1)(IL2)(IL4)(CCN)*<br>3. Develop flexible composing, revising, and editing strategies for a variety of purposes, audiences, writing situations, and genres; *(WR1)(CCN)*<br>4. Reflect on knowledge and skills developed in this course and their potential applications in other writing contexts; *(WR1)(WR3)(CCN)*<br>5. *Identify and apply some basic elements of information literacy and critical thinking such as locating and analyzing sources, evaluating evidence, and answering objections; (WR1)(WR2)(IL1)(IL2)(IL3)(IL4)(IL5)* |
| Course Title | Course titles must match. Institutions may use different punctuation or Arabic/Roman numerals in course titles.<br>**Note:** The course title will not be the required primary designator for the common course numbering system courses.<br>**Example:**<br>MTH 111Z<br>Precalculus I: Functions (approved title)<br>Precalculus 1 - Functions (with allowed Arabic numeral and punctuation) |

# Approved Information for CCNAP Lecture/Lab Courses

**For CCN Courses with a Separate CCNAP for Lecture and Lab:**

1. Transfer Council approves a uniform number of credits for both lecture and lab (under two, separate CCNAPs).
    a. Institutions may determine the credit distribution between the two courses, but their combined credits must equal the approved total.
    b. Institutions must assign a minimum of one credit for all courses with a CCNAP.
2. If the lecture and lab are
    a. Two separate courses, meaning a stand-alone lecture and stand-alone lab with separate CCNAPs for each course, both courses MUST be completed successfully to articulate as a completed Z-lecture and lab.
3. Institutions MUST offer BOTH the lecture and the lab as separate courses, though institutions may decide if the lecture and lab will be offered in the same or different quarters.
4. An institution may only require a student to retake the part of a separate lecture and lab course in which they failed to meet institutional requirements, as outlined in ORS 715-025-0100, section 4.



**For CCN Courses with a Single CCNAP for Lecture and Lab:**

1. The Transfer Council approves a uniform number of credits for the course (lecture and lab under one CCNAP).
2. Institutions MUST offer BOTH the lecture and the lab as one course.
3. If the lecture and lab is
    a. One course with one CCNAP for both the lecture and lab, the entire course MUST be completed successfully to articulate as a completed Z-lecture and lab.

# Course Sequence Completion Plans

All sequential courses will provide a teach out plan which outlines how institutions will help current students complete a course sequence if courses in a sequence have become subject to a CCNAP, as per ORS 715-025-0105. For the CCNAP, sequential courses are defined as courses that

are inter-dependent (e.g., requisites) and may or may not need to be taken in a certain order.

**Note:** If a CCNAP is part of a course sequence, insert the plan here; otherwise, omit this section.

## CCNAP Termination

If an institution decides to terminate a course covered by a CCNAP, it must notify the Transfer Council. Students who were enrolled in that course at the time of its termination continue to have the rights and guarantees under the CCNAP for at least seven academic years following the year of termination (OAR 715-025-0105).

Date: October 23, 2025

Provide copies to:

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| CCN Chemistry Subcommittee Cochairs | Kenneth Friedrich (PCC) and<br>Christopher Walsh (EOU) |
| Transfer Council Co-chairs | Christopher Long<br>David Plotkin |
| HECC CCN Lead | Jane Denison-Furness, Transfer Initiatives Unit |