

Overview of Chemistry Curriculum Alignment

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Alignment at UVU – UVU’s Chemistry Department is primarily a service department. The department offers general education and lower division prerequisites across multiple academic programs across schools and colleges. The department collaborates closely with faculty within the College of Science to ensure that students meet essential competencies for success in their chosen fields. These discussions take place during monthly department chair meetings within the College of Science.

Alignment with USHE Institutions – Chemistry department chairs across the Utah System of Higher Education (USHE) meet annually to discuss curriculum alignment, adaptation, and system-wide initiatives. Dr. Merrill Halling currently leads this state-level committee. Topics covered include course alignment (refer to curriculum map below), lower division pathways, general education, and evaluations of competency-based curriculum and exams.

Utah System of Higher Education
Course Articulation and Common Numbers
Chemistry – January 17, 2023 **DRAFT JAN 2024**

	Utah Tech University	Salt Lake Community College	Snow College	Southern Utah University	University of Utah	Utah State University	Utah Valley University	Weber State University
1010 Introductory Chemistry	CHEM 1010 PS	CHEM 1010 PS	CHEM 1010 PS	CHEM 1010 PS	X XCHEM 1010 Chemistry, Humanity, and the Environment SUST	CHEM 1010 PS	CHEM 1010 PS	CHEM 1010 PS
1015 Introductory Chemistry Lab	CHEM 1015 LAB (optional)	X	CHEM 1015 LAB	CHEM 1015 PS	X	CHEM 1015 (1) Optional	CHEM 1015 Optional	X
1110 Elementary Chemistry	CHEM 1110 PS	CHEM 1110	CHEM 1110 PS	CHEM 1110 PS	X	CHEM 1110 PS	CHEM 1110 PS	CHEM 1110 PS
1115 Elementary Chemistry Lab	CHEM 1115 LAB	CHEM 1115	CHEM 1115 LAB	CHEM 1115 PS	X	CHEM 1115 (1)	CHEM 1115	CHEM 1115
1120 Elementary Organic Biochemistry	CHEM 1120	CHEM 1120	CHEM 1120	CHEM 1120	X CHEM 1120 Elementary Bioorganic Chem	CHEM 1120 PS	CHEM 1120 PS	CHEM 1120
1125 Elementary Organic Biochemistry	CHEM 1125	CHEM 1125	CHEM 1125	CHEM 1125	X	CHEM 1125	CHEM 1125	CHEM 1125
1130 Introduction to General Organic Biochemistry (nursing)	CHEM 1150 PS	X	X	X	CHEM 1130	X	X	CHEM 1130 PS
1135 Introduction to General Organic Biochemistry Lab	CHEM 1155 LAB	X	X	X	Lab is part of 1130	X	X	CHEM 1135
1210 Principles of Chemistry I	CHEM 1210 PS	CHEM 1210	CHEM 1210 PS	CHEM 1210 PS	CHEM 1210 PS/LS	CHEM 1210	CHEM 1210 PS	CHEM 1210 PS
1215 Principles of Chemistry I Lab	CHEM 1215 LAB	CHEM 1215	CHEM 1215 LAB	CHEM 1215 PS	CHEM 1215	CHEM 1215	CHEM 1215	CHEM 1215
1220 Principles of Chemistry II	CHEM 1220	CHEM 1220	CHEM 1220	CHEM 1220	CHEM 1220 PS/LS	CHEM 1220	CHEM 1220 PS	CHEM 1220
1225 Principles of Chemistry II Lab	CHEM 1225	CHEM 1225	CHEM 1225	CHEM 1225	CHEM 1225	CHEM 1225	CHEM 1225	CHEM 1225
2310 Organic Chemistry I	CHEM 2310	CHEM 2310	CHEM 2310	CHEM 2310	CHEM 2310	CHEM 2310	CHEM 2310	CHEM 2310
2315 Organic Chemistry I Lab	CHEM 2315	CHEM 2315	CHEM 2315	CHEM 2315	CHEM 2315	CHEM 2315	CHEM 2315	CHEM 2315
2320 Organic Chemistry II	CHEM 2320	CHEM 2320	CHEM 2320	CHEM 2320	CHEM 2320	CHEM 2320	CHEM 2320	CHEM 2320
2325 Organic Chemistry II Lab	CHEM 2325	CHEM 2325	CHEM 2325	CHEM 2325	CHEM 2325	CHEM 2325	CHEM 2325	CHEM 2325
3000 Quantitative Analysis	CHEM 3000	X	X	CHEM 3000	CHEM 3000	CHEM 3000	CHEM 3000	CHEM 3000
3005 Quantitative Analysis Lab	CHEM 3005	X	X	CHEM 3005	Lab is part of 3000	CHEM 3005	CHEM 3005	CHEM 3005 (2)

National Alignment – The Chemistry Department is presently pursuing accreditation with the American Chemical Society. This involves aligning curriculum and assessment practices with national guidelines as a significant part of the application process.

Advisory Boards – The Chemistry Department meets biannually with the College of Science Advisory Board. These meetings, along with regular engagements with industry partners, have spurred the creation of new courses and certificate programs. Noteworthy efforts include the introduction of cornerstone courses on research, careers, and ethics, as well as the upcoming undergraduate certificate in formulations chemistry. Collaborations with local industry partners, such as doTerra, Nuskin, Young Living, and others have already yielded two courses in this academic program.

Disciplinary Peer Evaluations – The Chemistry Department collaborates closely with faculty and academic advisors to ensure coursework meets student needs. These interactions occur regularly in both informal and formal evaluation, including cyclical academic program reviews. For example, in the 2022-2023 academic year, the department engaged in a 7-year cyclical review of existing academic programs. This review included an internal review conducted by faculty and an external review conducted by chemistry professors from Southern Utah University and Weber State University. External reviewers commended the Chemistry Department's efforts in developing cornerstone and formulation chemistry courses, as well as its collaborative approach to aligning instruction and learning outcomes for equitable learning experiences across different course sections. Interviews with faculty and students revealed high praise for the department's curriculum, with particular emphasis on the excellence in teaching laboratory skills, especially in research. Students expressed confidence in their preparation for careers in the chemistry sciences, underscoring the department's commitment to student success and effective teaching.