

BACHELOR OF SCIENCE IN CHEMISTRY TEACHING
With option for combined BS/MEd in Secondary Level Science Teaching
 2/15/21

This plan of study meets requirements for a BS in Chemistry Teaching and USBE endorsements in Chemistry and Physics. Additional electives can be taken to earn endorsements in Physical Science, Earth Science and English as a Second Language (ESL). Additional coursework is required to obtain a teaching license and can be taken post-BS or as part of the joint BS/MEd program in Chemistry Teaching and Educational Psychology. Note that the BS/MEd option only adds one course to the requirements for licensure so most students will benefit from this pathway. Students should consult with an advisor early in the program to ensure that the appropriate pre-requisite, general education and endorsement courses are taken.

REQUIRED SCIENCE CORE COURSES (25-27 CR)

COURSE	TITLE	CR
MATH 1050 & MATH 1060 OR MATH 1080	COL ALGEBRA (4) & TRIGONOMETRY (3) OR PRECALCULUS	7 OR 5
MATH 1210	CALCULUS I	4
MATH 1220	CALCULUS II	4
MATH 2210	CALCULUS III	3
PHYS 2210	PHYS SCI ENG I	4
PHYS 2215	PHYS SCI ENG I LAB	1
PHYS 2220	PHYS SCI ENG II	4

REQUIRED CHEMISTRY COURSES (39 CR)

COURSE	TITLE	CR
CHEM 2000	UNDERGRAD SEMINAR	1
CHEM 1210	GENERAL CHEMISTRY I	4
CHEM 1215	GENERAL CHEMISTRY LAB I	1
CHEM 1220	GENERAL CHEMISTRY II	4
CHEM 1225	GENERAL CHEMISTRY LAB II	1
CHEM 2310	ORGANIC CHEMISTRY I	4
CHEM 2315	ORGANIC CHEMISTRY I LAB	2
CHEM 2320	ORGANIC CHEMISTRY II	4

CHEM 2325	ORGANIC CHEMISTRY II LAB	2
CHEM 3000	QUANTITATIVE ANALYSIS	4
CHEM 3100	INORGANIC CHEM	4
CHEM 3060	QUANTUM CHEM & SPECT	4
CHEM 3070	THERMODYNAMICS & KINETICS	4

CHOOSE TWO ADVANCED CHEMISTRY LABS (4-6 CR)

COURSE	TITLE	CR
CHEM 5700	ANALYTICAL CHEM LAB	2
CHEM 5710	ADV ORGANIC CHEM LAB	2
CHEM 5720	PHYSICAL CHEM LAB	2
CHEM 5730	INORGANIC CHEM LAB	2
CHEM 4965 OR CHEM 5380 OR CHEM 4800	INTERNSHIP COURSE & SERVICE OR LAB-BASED TA SERVICE OR RESEARCH INTERNSHIP/ INDEPENDENT STUDY	2-4

**CHOOSE ALLIED SCIENCE ELECTIVES FOR USBE ENDORSEMENTS IN
 PHYSICAL SCIENCE AND/OR EARTH SCIENCE (6-15 CR)**

COURSE	TITLE	CR
ASTRO 1050 OR ASTRO 1060 OR ASTRO 2060 OR ASTRO 4060	THE SOLAR SYSTEM OR THE UNIVERSE OR POPULAR OBS ASTRON OR OBS ASTRON FOR SCI	3
ATMOS 1010 OR ATMOS 1020 OR ATMOS 3100	SEVERE & UNUSUAL WEATHER OR CLIMATE CHANGE OR ATMOS CHEM & AIR POLLUTION	3
BIOL 1620 OR BIOL 3450 OR BIOL 3460	FUND PRIC BIOL II OR RAINFOREST ECOLOGY (IR) OR GLOBAL ENVIRONMENTAL ISSUES (IR)	3
GEO 1110 OR GEO 1100	INTRO TO EARTH SYSTEM OR EVOLVING EARTH	3
GEO 2100 OR GEO 3030	REACTIVE EARTH OR LIVING WITH EARTHQUAKES & VOLCANOES (IR)	3

TOTAL SCIENCE CREDITS = 69-87

REQUIRED EDUCATION COURSES (17-18 CR)

COURSE	TITLE	CR
EDU 1010 OR SCI 3670 OR SCI 5050	INTRO TO TEACHING OR SCIENCE COMM & MENTORING OR SCIENCE OF LEARNING	2-3
ETHNC 2550 OR ETHNC 2570 OR ETHNC 2580 OR ETHNC 2590	AFRICAN AMER EXP (HF) OR AMER INDIAN EXP (HF) OR ASIAN PACIFIC AMER EXP (BF) OR PACIFIC ISLANDER EXP (HF)	3
ECS 2150	INTRO TO MULTICULTURAL ED	3

EDPS 3721	ADOLESCENT PSYCHOLOGY	3
EDU 5170	SECONDARY SCIENCE METHODS	3
ECS 5709	BUILDING FAMILY PARTNERSHIPS (32 field hours required)	3

OPTIONAL ELECTIVES FOR COMPLETION OF ENGLISH AS A SECOND LANGUAGE (ESL) ENDORSEMENT (9 CR)

COURSE	TITLE	CR
EDU 5200	TEACHER LANGUAGE AWARENESS	3
ECS 5645	ASSESSMENT OF LINGUISTICALLY DIVERSE POPULATIONS (PR: ECS 2150 OR ECS 5634 OR ECS 6634 OR ECS 5715 OR ECS 6715 AND SP ED 5021/6021 OR ECS 6035)	3
ECS 5647	INSTRUCTIONAL METHODS FOR LINGUISTICALLY DIVERSE POPULATIONS (PR: EDU 5200, ECS 5645)	3 (16 HRS FIELD)

*ESL ENDORSEMENT REQUIRED TO TEACH IN GRANITE AND SALT LAKE CITY SCHOOL DISTRICTS. CAN BE TAKEN AFTER HIRE

TOTAL REQUIRED CREDITS FOR CHEMISTRY TEACHING MAJOR = 86-105

NOTE: This plan of study fulfills USBE requirements for teaching endorsements in Chemistry, with options for endorsements in Physical Science, Earth Science and English as a Second Language. Students must also complete all General Education and Bachelor's degree requirements to total a minimum of 122 credit hours in order to graduate.

--END OF BS IN CHEMISTRY TEACHING REQUIREMENTS

REQUIREMENTS FOR MASTERS OF EDUCATION IN EDUCATIONAL PSYCHOLOGY with LICENSURE

(Combined BS/MEd in Secondary Level Science Teaching **only**)(29-32 cr)

(For information about the MEd program contact sara.hatch@utah.edu at the Urban Institute for Teacher Education)

COURSE	TITLE	CR	SEM	REQUIREMENT
ED PS 6151	Educational Applications of Technology	3	1	Licensure, MEd
ED PS 6035	Instructional Assessments: Design, Implementation, and Analysis (online)	3	1	Licensure, MEd
SP ED 6022	Principles of Instruction & Behavior Support	3	1	Licensure, MEd
EDU 6201	Teaching Practices, Ethics & Professional Development (PPAT)	1	1	Licensure, MEd
EDU 6490	Field Practicum: Secondary (9 hours/week in field)	3	1	Licensure, MEd
EDU 6491	Professional Development & Teacher Research	3	2	Licensure, MEd
SP ED 5012	Teaching Students with Disabilities in Inclusive Secondary Classrooms	3	2 or 3	Licensure, Med
EDU 6495	Student Teaching: Secondary (12 weeks full-time)	9	2	Licensure, MEd
ED PS/EDU 5XXX- 6XXX or other	STEM Instruction Elective (see adviser)	1-3	2	MEd

TOTAL REQUIRED MEd and LICENSURE

CREDITS = 29-32

Students must complete a minimum of 30 hours to graduate