

EDUCATION Endorsements: Science Education

Wyoming Teacher Education Program

Fall 2010
Updated: Spring 2018

Name: _____

Evaluated by: _____

W# _____

Matric. Date _____

Date: _____

Eligible students must have successfully completed the W. T. E. P. and hold (or be eligible to hold) an initial Wyoming teaching license in Secondary Science Education. All endorsements are based on successful completion of content coursework in the specific category listed based on minimum semester hours. Any course can count toward only one Coursework Category. Successful completion requires a final grade of "C" or higher. Requests for waivers or substitutions must be petitioned through the UW Teacher Preparation and Advising Office. Each of these add-on endorsement areas is based on a *minimum 27 semester credit hours*.

Biology Endorsement - 27 hrs. minimum

General Biology (3 credits minimum) _____ Sem/Yr. _____

Botany or Zoology (3 credits minimum) _____ Sem/Yr. _____

LIFE 2022: Animal Biology (4)
LIFE 2023: Plant & Fungal Biology (4)
LIFE 3600: Cell Biology (3)
Other BOT/ZOO at the 3000/4000 level (3)

Ecology (3 credits minimum) _____ Sem/Yr. _____

Genetics (3 credits minimum) _____ Sem/Yr. _____

LIFE 3050: Genetics (4)
LIFE 3500: Evolutionary Biology (3)

Microbiology (3 credits minimum) _____ Sem/Yr. _____

Other coursework in Biology or Biochemistry
(3 credits minimum) _____ Sem/Yr. _____

Secondary Science Methods/Pedagogy _____ Sem/Yr. _____

Chemistry Endorsement - 27 hrs. minimum

General Chemistry (3 credits minimum) _____ Sem/Yr. _____

Organic Chemistry (3 credits minimum) _____ Sem/Yr. _____

Inorganic Chemistry (3 credits minimum) _____ Sem/Yr. _____

Biochemistry (3 credits minimum) _____ Sem/Yr. _____

MOLB 3610: Principles of Biochemistry (4)
MOLB 4100: Clinical Biochemistry (3)
GEOL 4777: Geochemistry of Natural Waters (3)
BOT 4780: Biogeochemistry (4)
SOIL 4535: Soil Biogeochemistry (3)

Physical Chemistry (3 credits minimum) _____ Sem/Yr. _____

CHEM 3550: Physical Chemistry for Life Sciences (3)
CHEM 4507: Physical Chemistry I (3)

Quantitative or Chemical Analysis
(3 credits minimum) _____ Sem/Yr. _____

CHEM 2230: Quantitative Analysis (4)
CHEM 4230: Instrumental Methods of Chemical Analysis (4)

Secondary Science Methods/Pedagogy _____ Sem/Yr. _____

_____ Sem/Yr. _____

Earth Science Endorsement - 27 hrs. minimum

General Biology (3 credits minimum)	_____	Sem/Yr. _____
General Chemistry (3 credits minimum)	_____	Sem/Yr. _____
Geology (3 credits minimum)	_____	Sem/Yr. _____
General or College Physics (3 credits minimum)	_____	Sem/Yr. _____
Botany or Zoology (3 credits minimum)	_____	Sem/Yr. _____
	LIFE 2022: Animal Biology (4) LIFE 2023: Plant & Fungal Biology (4)	
Environmental Science (3 credits minimum)	_____	Sem/Yr. _____
	ESS/GEOG 3480: Environmental Change (3) GEOL 3500: Global Change, A Geological Perspective (4) BOT 4780: Biogeochemistry (4) SOIL 4353: Soil Biogeochemistry (3) ESS/ATSC/BOT/GEOL 4001: Modeling the Earth System (4) BOT/GEOG 4111: Remote Sensing of the Environment (4)	
Secondary Science Methods/Pedagogy	_____	Sem/Yr. _____
	_____	Sem/Yr. _____

Physics Endorsement - 27 hrs. minimum

General Physics: minimum 6 semester credit hours required (one full academic year at the college level)	_____	Sem/Yr. _____
	_____	Sem/Yr. _____
Waves/Optics (3 credits minimum)	_____	Sem/Yr. _____
Electricity/Magnetism (3 credits minimum)	_____	Sem/Yr. _____
Thermodynamics (3 credits minimum)	_____	Sem/Yr. _____
Environmental Physics (3 credits minimum)	_____	Sem/Yr. _____
Secondary Science Methods/Pedagogy	_____	Sem/Yr. _____
	_____	Sem/Yr. _____

A teaching endorsement is not a stand-alone teacher certification program. Endorsements are issued by the Wyoming Professional Teaching Standards Board (PTSB) to state-licensed Elementary (K-6) and Secondary (6-12) teachers qualified to teach in specific subject areas, in addition to their initial certification(s). There are two ways in which to add teaching endorsements.

Institutional Recommendations: By state statute, the University of Wyoming, College of Education is allowed to provide Institutional Recommendations for in specific subject areas only. For science, these areas only include: Biology, Chemistry, Earth Science and Physics.

Demonstration of Competency: The rules governing this process have been set forth by the PTSB. An applicant may only use the Demonstration of Competency route to add an endorsement at any grade level for which the applicant is already currently licensed. More information can be found through the PTSB's website.

Notes and Petitions