

**Tennessee Technological University**  
 Post-Baccalaureate Licensure Program  
 Secondary Science Education (Grades 7-12)  
 Chemistry - Endorsement Code 416

**General Education**

EXPW 2430	First Aid, Safety, CPR Or Evidence of First Aid/Safety/CPR Training	2	_____
MATH 1710	Pre-Calculus I	3	_____
MATH 1830	Concepts of Calculus	3	_____

**Professional Education**

CUED 4150	Middle Level Curriculum Or CUED 6150 Middle School Curriculum	3	_____
FOED 3830	Field Experience in Education Or CUED 6800 Field Experience	1	_____
FOED 2011 & 1820	Intro to Teaching & Technology & Field Experience Or FOED 6320 Educational Applications of Technology	3	_____
FOED 3010	Integrating Instructional Technology in the Classroom Or CUED 6430 Production of Instructional Materials	3	_____
EDPY 2200	Educational Psychology Or EDPY 7200 Advanced Educational Psychology	3	_____
EDPY 3300	Evaluation & Guidance Or EDPY 6350 Measurement & Evaluation	3	_____
SPED 3000	Teaching Persons W/ Disabilities in the Reg Classroom Or SPED 6010 Survey of Disability Characteristics, Procedures & Methods in Special Education	3	_____
READ 3350	Teaching Reading in Content Areas Or READ 6350 Secondary School Reading Prog	3	_____
SEED 4123 Or 5123	Materials & Methods of Teaching Science	3	_____
FOED 3820	Field Experience in Education Or CUED 6800 Field Experience	1	_____
SEED 4870 & 4880 & 4890	Student Teaching I, II & Seminar	12	_____

**General / Physical Science Core**

ASTR 1010 or 1020	Intro to Modern Astronomy	4	_____
BIOL 1010 & 1020	Intro to Biology I & II	8	_____
GEO 1040	The Dynamic Earth	4	_____
PHYS 2010	Algebra-based Physics I Or PHYS 2110 Calculus-based Physics	4	_____

**Science Specialization - Chemistry**

CHEM 1110 & 1120	General Chemistry I & II	8	_____
CHEM 3410	Quantitative Analysis	4	_____
CHEM 2530	Elements of Physical Chemistry Or CHEM 3500 Elements of Physical Chemistry	3	_____
CHEM 3010	Organic Chemistry Or CHEM 3005 Elementary Organic Chemistry	4	_____
CHEM 3990	Special Problem in Chem Education	1	_____
CHEM 3020	Organic Chemistry II Or CHEM 4110 Inorganic Chemistry Or CHEM 4310 Nuclear and Radiochemistry Or CHEM 4320 Spec. Ident. Of Org. Compounds Or CHEM 4710 Environmental Chemistry	3-4	_____