CHEM 805 – Chemical Management & Safety for HS Teachers 1 credit hour
This course addresses chemical management and safety issues that are commonly encountered in high school chemistry laboratories and stockrooms.

CHEM 810 – Environmental Chemistry for High School Teachers 3 credit hours
A study of the fate of chemicals in the air, water, and soil, and their impact on human health and the natural environment. Topics will include water pollution and water treatment, greenhouse gases and ozone-layer destruction, sources and management of hazardous wastes.

CHEM 820 – Inorganic Chemistry I for High School Teachers 1-4 credit hours
Designed specifically for high school teachers. The following topics will be covered in-depth: atomic theory, periodic trends, and chemical bonding. Laboratory exercises will emphasize materials that can be used with high school students.
Total Credits Allowed: 4.00

CHEM 821 – Inorganic Chemistry II for High School Teachers 1-4 credit hours
The following topics will be covered in-depth: descriptive inorganic chemistry, acid-base concepts, and coordination compounds.
Total Credits Allowed: 4.00
Prerequisite: CHEM 820

CHEM 855 – Biochemistry for High School Teachers 3 credit hours
Chemistry of fats, protein, carbohydrates, hormones, vitamins, and other biologically important compounds. A solid background in organic chemistry is needed for success in this course.

CHEM 864 – Analytical Chemistry for High School Teachers 2 credit hours
Designed specifically for high school teachers. The following topics will be covered in-depth: laboratory equipment and techniques, accuracy and precision, QA and QC, solubility, acid-base equilibrium, titrations, electrochemical methods, and spectroscopy. Students should have a strong background in general chemistry topics prior to enrolling in this course.

CHEM 865 – Instrumental Analysis for High School Teachers 3-4 credit hours
The following topics will be covered in-depth: titration, absorption and emission spectroscopy, chromatography. Laboratory exercises emphasize materials to be used with high school students.
Total Credits Allowed: 4.00

CHEM 866 – Analytical Instrumentation for High School Teachers 1 credit hour
Designed specifically for high school teachers. The following topics will be covered in-depth: laboratory equipment and techniques with a focus on advanced electrochemical methods, chromatography, and spectroscopy. Students should have a strong background in general chemistry topics prior to enrolling in this course.

CHEM 882 – Physical Chemistry for High School Teachers 3-4 credit hours
Will cover in-depth each of the following topics: thermodynamics, equilibrium, chemical kinetics, and electrochemistry.
Total Credits Allowed: 4.00

CHEM 889 – Problems in Chemistry 1-3 credit hours
Independent investigations of chemistry problems. Three hours of laboratory work each week for each hour credit. Department Consent Required
Total Credits Allowed: 3.00

CHEM 890 – Directed Research 1-3 credit hours
Independent original research of a selected topic in chemistry under the direction of a chemistry graduate faculty member.
Total Credits Allowed: 9.00

CHEM 896 – Thesis 6 credit hours
Total Credits Allowed: 4.00

CHEM 899 – Special Topics 1-3 credit hours
This course will cover topics not addressed in other courses offered by the department. Most topics will consist of a highly specialized area of study or revolve around issues or recent trends and innovations related to high school chemistry teaching.
Total Credits Allowed: 10.00