2017-2018

Bachelor of Science (BS) — **Program of Study for Chemistry Majors**
Degree Code 214* — **CHEMISTRY**
Concentration Code 214J — **SECONDARY EDUCATION LICENSURE**

I. CORE CURRICULUM 44

CHE 1101, 1110, 1102, 1120, and MAT 1110 will fulfill General Education requirements.

II. PROFESSIONAL EDUCATION REQUIREMENTS 24

A minimum grade of C is required in each professional education course. CI 2300 & FDN 2400 are required prior to admission to Teacher Educ.

CI 2300 _____ (2) Teaching and Learning in the Digital Age *(Entry course to teacher education)*
FDN 2400 _____ (2) Critical Perspectives on Teaching and Learning *(Pre or Co: CI 2300) (Entry course to teacher education)*
PSY 3010 _____ (3) Psychology Applied to Teaching *(Pre or Co: CI 2300)*
SPE 3300* _____ (3) Creating Inclusive Learning Communities *(Pre: CI 2300, FDN 2400, PSY 3010)*
C I 3400* _____ (2) Policies and Practice in Educational Assessment *(Pre: CI 2300, FDN 2400, PSY 3010)*
C I 4900 _____ (12) Student Teaching **[CAP]** *(Cumulative 2.7 GPA; All courses in professional core must be completed with grades of C (2.0) or higher prior to student teaching, along with other courses (including methods and reading) identified within the major.*

PROFICIENCIES:
Reading _____
English _____

*Admission to Teacher Education required.

Minimum 2.7 cumulative GPA required to graduate.

NOTE: Teacher licensure programs require a minimum 2.7 cumulative GPA from admission into the teacher education program until graduation, including for admission to student teaching. Admission also requires students to take and satisfy testing requirements for Reading, Writing and Math areas of the PRAXIS I Core. The PRAXIS II Area Exams are required prior to the end of student teaching.

III. MAJOR REQUIREMENTS *(Not including 12 s.h. already counted in I, above)* 52

2.0 major GPA is required for graduation. Major GPA calculation will include <u>all</u> courses taken in the major department, plus any other courses under III. Minimum of 18 semester hours of courses taken to fulfill major requirements must be courses offered by Appalachian.

A. Chemistry (32 semester hours)

CHE 1101/1110_____ (4) Introductory Chemistry I & Lab *(Pre: MAT 1020 or higher)*
CHE 1102/1120_____ (4) Intro Chemistry II & Lab *(Pre: CHE 1101 & 1110; MAT 1020 or higher; Co: 1120)*
CHE 2210 _____ (3) Quantitative Analysis *(Pre: CHE 1102 & 1120; Co: 2211)*
CHE 2211 _____ (1) Quantitative Analysis Lab *(Co: CHE 2210)*
CHE 3000 _____ (1) Introduction to Chemical Research *(Pre: CHE 2101 or 2202; 2210)*
CHE 3301 _____ (3) Physical Chemistry I *(Pre: CHE 2210 & 2211; MAT 1120; PHY 1151)*
CHE 3303 _____ (1) Physical Chemistry I Laboratory **[WID]** *(Pre: RC 2001; Pre/Co: CHE 3301)*
CHE 3404 _____ (3) Inorganic Chemistry *(Pre: CHE 2101 & 2102 or 2202 & 2204; CHE 2210 & 2211)*
CHE 3521 _____ (1) Secondary Science Field Experience *(Pre: Jr/Sr standing)*

Experience as a tutor through the Learning Assistance Program or the Supplemental Instruction Program is strongly recommended.

CHOOSE ONE GROUP OF 11 semester hours:

CHE 2101 _____ (3) Fundamentals of Organic Chemistry *(Pre: CHE 1102 & 1120; Co: 2102)*
CHE 2102 _____ (1) Fundamentals of Organic Chemistry Lab *(Pre: CHE 1102 & 1120; Co: 2101)*
Plus 7 semester hours of chemistry courses (CHE 4580, Biochemistry I is recommended) _____

OR

CHE 2201 _____ (3) Organic Chemistry I *(Pre: CHE1102 & 1120; Co: 2203)*
CHE 2203 _____ (1) Organic Chemistry I Lab *(Pre: CHE 1102 &1120; Co: 2201)*
CHE 2202 _____ (3) Organic Chemistry II *(Pre: CHE 2201 & 2203 w/min grade C-; Co: CHE 2204)*
CHE 2204 _____ (1) Organic Chemistry II Lab *(Pre: CHE 2201 & 2203 w/min grade C-; Co: CHE 2202)*
Plus 3 semester hours of chemistry courses (CHE 4580, Biochemistry I is recommended) _____

B. Physics (10 semester hours)

PHY 1150 _____ (5) Analytical Physics I *(Co: MAT 1110)*
PHY 1151 _____ (5) Analytical Physics II *(Co: MAT 1120)*

C. Mathematics (8 semester hours)

MAT 1110 _____ (4) Calculus with Analytic Geometry I *(Pre: MAT 1025 w/min grade C-)*
MAT 1120 _____ (4) Calculus with Analytic Geometry II *(Pre: MAT 1110 w/min grade C-)*

D. Education (6 semester hours) *Minimum "C" grade is required in both these courses.*

G S 4403 _____ (3) Teaching Science in Middle and High Schools **[WID]** *(Pre: RC 2001)*
G S 4404 _____ (3) The Meaning & Nature of Science **[WID]** *(Pre: RC 2001; Sr. standing)*

E. Other Science (8 semester hours)

BIO 1801 _____ (4) Biological Concepts I *(Co: CHE 1101)*
GLY 1101 _____ (4) Introduction to Physical Geology

IV. MINOR (optional)

V. ELECTIVES (taken to total 122 hours for the degree) 2

2 semester hours of free electives must be outside the major discipline. **122**