Chemistry AB 130 Mix and Match

Domain	CPP courses needed to fulfill
215 Subtest 1 Foundational-Level General Science	
General Science Domain 1: Scientific Practices, Engineering Design and Applications, and Crosscutting Concepts (Subtest I)	Choose one of the following: _____SCI 2000, 2990, 4000, or 4990 (student research, or department equivalent) _____SCI 4610 or department equivalent Senior Research _____SCI 4620 Senior Seminar _____ CHM 3520L Physical Chemistry Laboratory
General Science Domain 2: Physical Sciences (Subtest I)	Complete all _____CHM 1210/L General Chemistry I & Lab _____CHM 1220/L General Chemistry II & Lab _____PHY 1210/L (or 1510/L) Physics of Motion, Fluids, and Heat & Lab _____PHY 1220L (or 1520/L) Physics of Electromagnetism, Circuits, and Light & Lab
General Science Domain 3: Life Sciences (Subtest I)	Complete all _____BIO 1210/L Foundations of Biology: Energy and Matter and Information & Lab _____BIO 1220/L Foundations of Biology: Evolution, Ecology, and Biodiversity & Lab
General Science Domain 4: Earth and Space Sciences (Subtest I)	Complete all _____GSC 1110/1410L Principles of Geology & Lab _____GSC 1160 Introduction to Astronomy _____GSC 3500 Natural Disasters
218 Chemistry specific domains (Subtest 2)	
Domain 1: Structure and Properties of Matter (Subtest II)	Complete these courses _____CHM 1210/L General Chemistry I & Lab _____CHM 3050 Elements of Physical Chemistry 2 OR CHM 3120 Quantum Physical Chemistry _____CHM 2210/L Quantitative Analysis & Lab Select one of the following 3 courses _____CHM 3420/L Spectroscopic Methods & Lab _____CHM 3430/L Separation Methods & Lab _____CHM 3440/L Electroanalytical Methods & Lab

Domain 2: Chemical Reactions and Chemical Bonding (Subtest II)	Complete these courses _____CHM 1220/L General Chemistry II & Lab _____CHM 3520L Physical Chemistry Laboratory _____CHM 3140/L Organic Chemistry I & Lab _____CHM 3150/L Organic Chemistry II & Lab _____CHM 3210 Elements of Biochemistry OR CHM 3270/L Biochemistry
Domain 3: Energy (Subtest II)	Complete these courses _____CHM 3040 Elements of Physical Chemistry I OR CHM 3110 Classical Physical Chemistry

More detail about the Domains

Science: Foundational Level Science

- **General Science Domain 1: Scientific Practices, Engineering Design and Applications, and Crosscutting Concepts (Subtest I)**
  - Understand scientific practices
  - Understand engineering practices, design, and applications
  - Understand crosscutting concepts among the sciences and engineering
- **General Science Domain 2: Physical Sciences (Subtest I)**
  - Understand structure and properties of matter
  - Understand chemical reactions and biochemistry
  - Understand motion and stability: forces and interactions
  - Understand waves and their applications in technologies for information transfer
  - Understand energy
  - Understand electricity and magnetism
- **General Science Domain 3: Life Sciences (Subtest I)**
  - Understand the structure and function of cells
  - Understand growth, development, and energy flow in organisms
  - Understand ecosystems: interactions, energy, and dynamics
  - Understand heredity: inheritance and variation of traits
  - Understand biological evolution: unity and diversity

- **General Science Domain 4: Earth and Space Sciences (Subtest I)**
    - Understand Earth's place in the universe
    - Understand Earth's materials and systems and surface processes
    - Understand plate tectonics and large scale system interactions
    - Understand weather and climate
    - Understand natural resources and natural hazards

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- **Domain 1: Structure and Properties of Matter (Subtest II)**
    - Understand the structure of matter
    - Understand the properties of matter
    - Understand the behavior and properties of solutions
    - Understand nuclear processes
- **Domain 2: Chemical Reactions and Chemical Bonding (Subtest II)**
    - Understand chemical reactions
    - Understand chemical bonding
    - Understand conservation of matter and stoichiometry
    - Understand organic chemistry and biochemistry

- **Domain 3: Energy (Subtest II)**
    - Understand the definitions of energy, conservation of energy, and energy transfer
    - Understand energy in chemical processes and everyday life