Chemistry, Grades 9-12

|  |  |  |  |
| --- | --- | --- | --- |
| **II. Professional Requirements** | | **College Course Number and Title** | **Sem. Hrs.** |
| A. **Professional Requirements (minimum 26 semester hours)** | |  |  |
| 1. Content Planning and Delivery | |  |  |
| a. Curriculum and Instructional Planning | | Introduction to Teaching (EDU 101) | 1 |
| b. Instructional Strategies and Techniques in Content Area Specialty | | Methods of Teaching Science in Sec. (EDU 436) | 3 |
| c. Assessment, Student Data, and Data-based Decision-making | | Foundations of Education (EDU 290); Education Seminar (EDU 490)  Methods of Secondary Teaching (EDU 425) | 3  3  3 |
| d. Strategies for Content Literacy | | Reading in Content Area (EDU 392) | 3 |
| e. Critical Thinking and Problem Solving | | In all W.C. coursework | -- |
| f. English Language Learning | | Diversity in Education (EDU 385) | -- |
| 2. Individual Student Needs | |  |  |
| a. Psychological Development of the Child and Adolescent | | Child and Adolescent Growth and Development (EDU 230) | 3 |
| b. Psychology/Education of the Exceptional Child | | Education of Exceptional Individuals  (EDU 231) | 3 |
| c. Differentiated Learning | | Foundations of Education (EDU 290); Education Seminar (EDU 490);  Education of Exceptional Individuals (EDU 231) | --  --  -- |
| d. Classroom Management | | Classroom Organization Management  (EDU 453) | 3 |
| e. Cultural Diversity | | Diversity in Education (EDU 385) | 3 |
| f. Educational Psychology | | Education Psychology (EDU 221) | 3 |
| 3. Schools and the Teaching Profession | |  |  |
| a. Consultation and Collaboration | | Foundations of Education (EDU 290) | -- |
| b. Legal/Ethical Aspects of Teaching | | Foundations of Education (EDU 290) | -- |
| 4. Secondary Literacy *(minimum of 6 semester hours)* | |  |  |
| a. Reading and Writing in the Content Area | | Reading in Content Area (EDU 392) | -- |
| b. Instructional Interventions for Students with Reading Deficits | | Education of Exceptional Individuals  Reading in Content Area (EDU 392) | --  -- |
| B. **Field and Clinical Experiences** **(minimum of 10 semester hours)** | |  |  |
| 1. Early Field Experiences  *(minimum of 1 semester hour with a minimum of 30 clock hours)* | | Education Practicum I (EDU 291) | 2 |
| 2. Mid-Level Field Experiences  (minimum of 1 semester hour with a minimum of  45 clock hours) | | Education Practicum II (EDU 393) | 2 |
| 3. Culminating Clinical Experiences  (minimum of 8 semester hours with a minimum of 12 weeks in one placement) | | Student Teaching: High School (EDU 497) | 12 |
| III. Chemistry Content Knowledge Area (minimum of | | 35 semester hours) |  |
| A. | Chemistry Content Knowledge Area (minimum | of 35 semester hours) |  |
| 1. | History/Philosophy of Science and Technology *(minimum of 3 semester hours)* | History of Science (NSC 305) | 3 |
| 2. | Chemistry coursework - minimum of 20 semester hours which must include: |  |  |
|  | a. Inorganic Chemistry | Gen Chem I w/Lab (CHM 114/115)  Gen Chem II w/Lab (CHM 124/125) | 4  4 |
|  | b. Analytical Chemistry | Analytical Chemistry I (CHM 334)  Analytical Chemistry I Laboratory (CHM 335) | 4 |
|  | c. Organic Chemistry | Organic Chemistry I w/ lab (CHM 314/315) | 4 |
|  | d. Physical Chemistry | Physical Chemistry w/ lab (CHM 424/425) | 4 |
|  | e. Biochemistry | Biological Processes (BIO 114) | 3 |
|  | f. Chemistry Electives | Organic Chemistry II (CHM 324) | 3 |
| 3. | Additional Science coursework - minimum of 12 semester hours which must include: |  |  |
|  | a. Biology | Essentials of Biology (BIO 105) | 3 |
|  | b. Physics | Introduction to Physics (PHY 105) | 3 |
|  | c. Earth Science | Earth Systems (GEO 110) | 4 |
| d. Environmental Science | | Intro to Environmental Science (ENV 105) | 3 |