Chemistry, Grades 9-12

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| **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) | 333 |
| 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) | 44 |
|  | 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 |