Biology, 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) | 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. Biology Content Knowledge Area (minimum of 35 semester hours)** | |  |
| A. **Biology Content Knowledge Area (minimum of 35 semester hours)** | |  |
| 1. History/Philosophy of Science and Technology *(3 semester hours)* | History of Science (NSC 305) | 3 |
| 2. Biology coursework – minimum of 20 semester hours which must include: |  |  |
| a. Cell Biology | Molecular Cell Biology BIO 325  Prerequisites: BIO 124/125 and 114/115. | 4 |
| b. Plant Form and Function | Biological Processes BIO 114  Biological Processes Laboratory BIO 115  Biodiversity BIO 124  Biodiversity Laboratory BIO 125 | 3  1  3  1 |
| c. Animal Form and Function | Biological Processes BIO 114  Biological Processes Laboratory BIO 115  Biodiversity BIO 124  Biodiversity Laboratory BIO 125 | --  --  --  -- |
| d. Genetics | Genetics BIO 301  Prerequisites: BIO 124/125 and 114/115. | 4 |
| e. Evolution | Evolution BIO 220  Prerequisites: BIO 114/115 and 124/125. | 3 |
| f. Biology Electives | One Elective Course | 3 |
| 3. Additional Science coursework - minimum of 12 semester hours which must include: |  |  |
| a. Chemistry | Gen Chem I w/Lab (Chem 114/115) | 4 |
| 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 |

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