Butler University Major: **Middle/Secondary Education**  
Butler University Degree: **Bachelor of Science (COE); Bachelor of Arts (LAS)**  
License: **CHEMISTRY Teaching Content Area**  
Grades: **5-12**  
*see LAS advisor for additional requirements

SECTION A. GENERAL EDUCATION REQUIREMENTS

**Required Courses**  
12 hours

FYS  First-Year Seminar – Self, Community, and the World (6 credit hours)  
GHS  Global and Historical Studies (6 credit hours)  
ICR  Indianapolis Community Requirement (1 course)  
BCR  Butler Cultural Requirement (8 events prior to graduation)  
WAC  Writing across the Curriculum (ED 498W)  
SAC  Speaking across the Curriculum (waived)

**6 Areas of Inquiry:**  
15 hours

1. **TI:** Text and Ideas - Humanities  
   3 hours

2. **PCA:** Perspectives in the Creative Arts – Fine Arts  
   3 hours

3. **SW:** Perspectives in the Social World – Social Sciences  
   0 hours
   
   College of Education students are exempt from this area of inquiry

4. **NW:** The Natural World (Earth Systems Science required for major)  
   5 hours

5. **AR:** Analytical Reasoning (MA 106 required for major)  
   3 hours

6. **PWB:** Physical Well Being  
   1 hour

Contact: Teacher Licensing, College of Education – Jordan Hall 185  
4600 Sunset Avenue, Indianapolis, IN 46208  
317-940-9331

Updated Fall 2012 - Subject to change pending modification by the Indiana Department of Education
B. CONTENT AREA COURSES

CHEMISTRY License Requirements for Grades 5-12

MA 106: Calculus and Analytic Geometry (5) from CORE is a prerequisite for major.

Major field test in Chemistry

**Required Courses in Physics and Biology:** 18-20 hours
- PH 201-202 Introduction to Analytic Physics (5,5)
  - or
- PH 107, 108 Elementary Physics (4,4)

- NW 262PH The Physical World (5)
- NW 260COE Earth System Science (5)

**Required Courses in Chemistry** 36 hours
- CH 105 General Chemistry I and Lab (5)
- CH 106 General Chemistry II and Lab (5)
  - OR
- CH 107 Advanced Placement General Chemistry—by placement exam only (6)

- CH 351 Organic Chemistry I and Lab (5)
- CH 352 Organic Chemistry II and Lab (5)
- CH 494 2 semesters of CH 494 (2) **OR** one of the following 400-level courses:
  - CH 424, CH 463, CH432

Plus at least three courses from the following list (two of the four chemistry divisions are required) to **total 36 hours in Chemistry**:

Analytical:
- CH 321 Analytical Chemistry I (5)
- CH 422 Analytical Chemistry II (3)

Inorganic:
- CH 332 Inorganic Chemistry (3)
- CH 431 Advanced Inorganic Chemistry (3)

Biochemistry:
- CH 361 Biochemistry (4)
- CH 462 Biochemistry IIA (4)

Physical:
- CH 471 Physical Chemistry I (3)
- CH 472 Physical Chemistry II (3)

Updated Fall 2012
C. PROFESSIONAL EDUCATION COURSES

COE CORE I:
ED 112  Introduction to the Profession of Teaching (2)
ED 245  Introduction to Computers in Education (3) (Must be taken in the same semester as ED112)

Must Complete COE CORE I classes with a C (2.0) or better and pass PRAXIS I before moving into COE CORE II

COE CORE II:
ED 241  Developmental Theory and Application in Education (3)
ED 242  Educating Children with Special Needs (2)
ED 244  Concepts of Education (3)

At the completion of COE CORE II student must apply to be admitted to Teacher Education.

PROGRAM SPECIFIC:
ED 227  Introduction to Middle-Secondary Students and Schools (3)
         (can be taken during COE CORE II)
ED 228  Content Area Literacy in Middle-Secondary Curriculum (3)
         (can be taken during COE CORE II)
ED 398  Multilingual Learners and Their Cultural Contexts (3)
         (can be taken during COE CORE II or COE CORE III)
ED 498W Methods for Teaching Multilingual Learners (3)
         (can be taken during COE CORE II or COE CORE III)
ED 492  Special Education Law (1)
         (can be taken during COE CORE II or COE CORE III)

COE CORE III: (must be admitted to Teacher Education)
ED 327  Curriculum and Instructional Strategies for Middle Schools (3):
         Prerequisites ED 227 and ED 228
ED 433  Content Area Methods for High School (4)
         Prerequisite ED 327

COE CORE IV:  Student Teaching Courses
ED 434:  Secondary Student Teaching Professional Seminar (2)
ED 423:  Student Teaching (5)(Middle Level Student Teaching)
ED 425:  Secondary Student Teaching (5) (High School)
D. ELECTIVES

NOTE: 126 hours are required for graduation from the University. At least 40 of the 126 hours needed for graduation must be in upper division courses – courses numbered 300 or above.

E. TESTING REQUIREMENTS – registration is at www.ets.org

PRAXIS I – PPST (Pre-Professional Skills Test) or other accepted benchmark indicator must be received 1 week prior to admission to COE CORE II classes. Information is available at www.ets.org/praxis/in/requirements.

PRAXIS II – Specialty Area Tests are required for teaching licensure in the state of Indiana. The tests measure understanding of the content and methods applicable to the specific subject areas. These tests should be taken before student teaching. Information is available at www.ets.org/praxis/in/requirements.

F. CPR/HEIMLICH/AED REQUIREMENT

Applicants who receive an ‘initial’ teacher’s license must have successfully completed training in:
   1. cardiopulmonary resuscitation that includes a test demonstration on a mannequin;
   2) moving a foreign body causing an obstruction in an airway/Heimlich; and
   3) AED

A copy of your CPR/Heimlich/AED certification is required for original licensure.

Please note: If you follow this specified plan you will have met the core curriculum course requirements, the Butler University graduation course requirements, and the initial Indiana licensing course requirements.