BACHELOR OF SCIENCE (BS) IN MIDDLE GRADES EDUCATION
WITH CONCENTRATIONS IN MATHEMATICS AND SCIENCE
Major Codes: 470 C, D (Teaching)
2016-2017

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I. General Education Requirements **44 SH**

SPECIAL NOTE: Middle Grades Education majors should refer to page 3 of this Program of Study for important information for recommended General Education courses that can be taken and count in the major. Courses identified for Middle Grades Education majors on page 3 also meet the requirements for General Education. Students should contact their advisor or the Middle Grades Coordinator (identified above) for questions relating to General Education recommendations and requirements.

II. Professional Education Requirements **All courses must be completed with "C" (2.0) or better.** **2 4 SH**

C I 2300____Teaching and Learning in the Digital Age (2) ***Entry course to teacher education. Required prior to admission to teacher education.***
FDN 2400 ____Critical Perspectives on Teaching and Learning (2) ***Required prior to admission to teacher education. Prerequisite or Co-requisite: CI 2300.***
PSY 3010_____Psychology Applied to Teaching (3) ***May be taken prior to or after admission to teacher education. Prerequisite or Co-requisite: C I 2300.***
SPE 3300_____Creating Inclusive Learning Communities (3) ***Admission to teacher education required. Prerequisites: CI 2300, FDN 2400, PSY 3010.***
C I 3400_____Policies and Practices in Educational Assessment (2) ***Admission to teacher education required. Prerequisites: CI 2300, FDN 2400, PSY 3010.***
C I 4900 _____Student Teaching (12) (Graded on S/U basis) **(CAP)** ***All courses in professional education core must be completed with grades of C (2.0) or better prior to student teaching, along with other courses (including methods and reading) identified within the major to be completed prior to student teaching and/or requiring C (2.0) or better.***

Praxis Exams :
PRAXIS I Core Academic Skills for Educators (CASE): *CASE Reading _____ *CASE Writing_____ *CASE Mathematics _____
PRAXIS II: Subject Tests: Middle school Mathematics _____ **OR** Middle School Science _____

III. Major Requirements: **69 SH**
(-12 Gen Ed)

A. Middle Grades Academic Concentrations: Mathematics, Science. **All courses within the concentrations must be completed with a "C" (2.0) or better. (See listing of required courses on page 2 of this POS and meet with advisor.)**

MATHEMATICS CONCENTRATION		**SCIENCE CONCENTRATION**	
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

B. The following courses must be taken using the cohort model. Please note that all cohort internships and student teaching can be done only in schools that have been identified by ASU as professional development schools. (See following page for additional information)

Block I (Second Semester Junior year. Please note that this block is offered only during the SPRING SEMESTER.)
** #+ CI 3900 Middle Grades Internship (3) (WID) (Prerequisite RC 2001 or its equivalent)
** #+ CI 3910 Middle Level Education (3)
**#+ CI 3920 Teaching Young Adolescents (3)
Courses from academic concentrations

Block II (First Semester Senior Year. Please note that this block is offered only in the FALL TERM.)
** #+ CI 4490 Middle Grades Curriculum, Instruction, and Assessment (4)
** #+ RE 4630 Reading in the Content Area (2)
** #+ CI/RE 4300 Literacy, Language, and Culture in Middle Grades Education (3)
** #+CI 4040 Mathematics in the Middle Grades (3)
** #+GS 4403 Teaching Science in the Middle and High Schools (3)

#Cannot be taken before being admitted to Teacher Education
*Should be taken before junior year (Pre-requisite to enter Teacher Education)
+Must have "C" (2.0) or higher for COE
**Must be taken before student teaching

C. CI 4450 Seminar in Middle Grades: Portfolio/Exhibition (1) is to be taken during the student teaching semester.

IV. Second Academic Concentration Second academic concentration requirements are met upon successful completion of middle grades content concentrations.

V. Electives 3 **SH**

TOTAL **128 SH**

MIDDLE GRADES CONCENTRATIONS

MATHEMATICS CONCENTRATION (24 SH)

MAT 1110 Calculus with Analytic Geometry I (4) **(Gen Ed: Quantitative Literacy)** (Prerequisite: MAT 1025, with a grade of "C-" or higher, or equivalent)
MAT 3910 Introduction to the Logic and Structure of Mathematics I (4) (Prerequisite: junior or senior standing or permission of the instructor)
MAT 3920 Introduction to the Logic and Structure of Mathematics II (4) (Prerequisite: MAT 3910 or permission of instructor)
CI 4040 Mathematics in the Middle Grades (3) **(Block Two, Fall only)**

Select at least one of the following courses:
STT 2810 Introduction to Statistics (3) (Prerequisite: MAT 1010 or higher)
MAT 4930 Basic Concepts of Probability and Statistics (3) (Prerequisite: MAT 3910 or MAT 3920 or permission of the instructor)

Select at least one of the following courses:
MAT 3610 Introduction to Geometry (3) (Prerequisites: MAT 2110 or MAT 2510)
MAT 4910 Informal Geometry (3) (Prerequisite: MAT 3910 or MAT 3920 or permission of the instructor)

Additional courses may be selected from the following list. Courses not listed may be taken with permission from your advisor.
MAT 1120 Calculus with Analytic Geometry II (4) (Prerequisite: MAT 1110 (with a grade of "C-" or higher)
MAT 2240 Introduction to Linear Algebra (3) (Prerequisite: MAT 1120 or permission of the instructor)
MAT 3010 Survey in the History of Mathematics (2) (Prerequisite: MAT 2110 or MAT 2510 or permission of instructor.)
MAT 3110 Introduction to Modern Algebra (3) (Prerequisites: MAT 2110 or MAT 2510, and RC 2001 or its equivalent. Corequisite: MAT 2240))
MAT 3520 Instructional Assistance (1) (Prerequisites: Junior or senior standing.)

SCIENCE CONCENTRATION (26 SH)

The Science Inquiry Perspective requires 8 semester hours from one theme (underlined). Courses in themes marked with an * must be taken sequentially. Check the course descriptions for any pre and co-requisites.

Eight semester hours (8 SH) from one of the General Education Science Inquiry themes listed below:

Biology in Society: BIO ___1201, ___1202, AND ___1203
OR (for transfers with credit) BIO ___1201/1204 AND ___1202/1205

The Blue Planet: GLY___1104 AND ___1105

***Chemistry Connections to Our Changing World:** CHE ___1101/ 1110 AND ___1102/1120

***How Things Work:** PHY ___1101 AND ___ 1102

***The Physics of Our Technological World**: PHY ___1103 AND ___1104

Physics of Self Expression: PHY ___1101, ___1812, ___1814

***Physics with Calculus**: PHY ___1150 AND ___1151

Restless Planet: Earth, Environment and Evolution: GLY ___1101, ___1102, ___1103

Required: One four hour (4 SH) science course from each of the remaining three sciences for a total of 12 sh:

Biology Chemistry Geology Physics

GS 3300 Educational Applications of Science Concepts (3) (Prerequisites: MAT 1010 or higher and at least sophomore standing.)
GS 4403 Teaching Science in Middle and High Schools (3) (Prerequisite: RC 2001 or its equivalent) **(WID) (Block Two, Fall only)**

A student must have at least a 2.70 grade-point average to be admitted to the teacher education program and must maintain a 2.70 grade-point average overall through student teaching.