



DEGREE WORKSHEET FOR:
Mathematics B.S. – Middle School Teaching Emphasis
2021-2022 Catalog
Degree Requirements – 120 credits

| YEAR 1 - FALL (16 credits) | | YEAR 1 - SPRING (16 credits) | |
|---|-----------|---|------------|
| ENG 122 College Composition (LAW1*) | 3 credits | MATH 131 Calculus I (LAX1*) | 4 credits |
| MATH 185 Number Sense and Algebra (LAX1*)^f | 3 credits | MATH 283 Fundamental Mathematics III | 3 credits |
| CS 120 Computer Programming | 3 credits | ENG 225 Communications on a Theme (LAW2*) | 3 credits |
| Liberal Arts Curriculum ^a | 6 credits | Liberal Arts Curriculum ^a | 6 credits |
| MATH 102 Success in Mathematical Sciences ^b | 1 credit | <i>Application for Initial Admission to PTEP^c</i> | |
| YEAR 2 - FALL (15 credits) | | YEAR 2 - SPRING (15 credits) | |
| MATH 132 Calculus II (LAX1*) | 4 credits | MATH 341 Introduction to Modern Geometry | 3 credits |
| MATH 286 Elements of Discrete Mathematics^f | 3 credits | MATH 391 Introduction to Number Theory^s | 3 credits |
| <i>STEP 161 Observation and Analysis of Sec. Teaching^f</i> | 2 credits | STAT 355 Intro to Applied Statistics and Probability^s | 3 credits |
| <i>EDF 366 Conceptions of Schooling</i> | 3 credits | <i>TESL 350 Second Language Acquisition^d</i> | 3 credits |
| <i>EDRD 340 Academic Lang/Literacy Devel Sec Content Area</i> | 3 credits | Liberal Arts Curriculum ^a | 3 credits |
| YEAR 3 - FALL (16 credits) | | YEAR 3 - SPRING (14 credits) | |
| MATH 317 Mathematical Foundations for Teachers^f | 3 credits | MATH 464 Introduction to History of Mathematics^s | 3 credits |
| MATH 386 Problem Solving^f | 2 credits | MED 341 Principles of Teaching Mathematics^s | 3 credits |
| MATH 385 Fundamentals of Mathematics Education^f | 1 credit | <i>STEP 262 Observation and Analysis of Sec. Teaching^s</i> | 2 credits |
| Liberal Arts Curriculum ^a | 4 credits | <i>EDSE 360 Adaptations/Modifications & Integration</i> | 3 credits |
| University Wide Credits | 6 credits | <i>PSY 247 Adolescent Learning and Motivation^e (LAB3*)</i> | 3 credits |
| <i>Request for Phase II Placement^c</i> | | <i>Application for Full Admission to PTEP^c</i> | |
| YEAR 4 - FALL (14 credits) | | YEAR 4 - SPRING (14 credits) | |
| MED 441 Methods of Teaching Mathematics^f | 3 credits | <i>STEP 464 Secondary Student Teaching</i> | 14 credits |
| MED 449 Teaching Mathematics with Technology^f | 3 credits | | |
| <i>STEP 363 Clinical Experience- Secondary^f</i> | 2 credits | | |
| <i>ET 449 Educational Technology Applications</i> | 3 credits | | |
| University Wide Credits | 3 credits | | |
| <i>Application for Student Teaching^c</i> | | | |

*See the [Liberal Arts Curriculum](#) webpage for more information

This four-year plan is a recommended schedule to complete your bachelor's degree in 4 years. Every UNC student must meet the following requirements in order to graduate with a bachelor's degree: earn a minimum of 120 semester credit hours; possess a minimum of a 2.00 cumulative grade point average; have at least 31 credit hours in courses designated as Liberal Arts Curriculum; meet all degree requirements in the student's major field of study. Each major and/or emphasis may have additional requirements necessary for graduation. **Students must consult with their major advisor to receive information on any additional graduation requirements.**

Admission Requirement – See Professional Teacher Education Program (PTEP) section in current Catalog for admission requirements. Equivalent of four years of high school mathematics that will enable student to begin a study of calculus.

Minor Required – No Minor required.

Contact Information –

School of Mathematical Sciences

Ross Hall Room 2239, 970-351-2820

School Web Page: <http://www.unco.edu/nhs/mathematical-sciences/>

BS Mathematics: Middle School Teaching Emphasis (cont.)

Notes –

^a Liberal Arts Core courses can be taken any semester (see Note 1)

^b You need to complete 4-9 credits of University-wide Electives.

^c PTEP Applications are due **early** in the semester; contact the Math Content Coordinator for specific dates.

^d Satisfies requirements for Colorado ELL Educator Preparation Standards.

^e PSY 349 Ed. Psychology for Secondary Teachers may be substituted, it does not count as an LAC course

^f Course is only offered in the fall semester

^g Course is only offered in the spring semester

- 1 The coursework in the Liberal Arts Curriculum (LAC) should be evenly distributed over the entire course of study rather than concentrated in the first two years. **You need to complete a minimum of 31 LAC credits in Written Communication (6 credits), Mathematics (3 credits), Arts & Humanities, History, Social & Behavioral Sciences, U.S. Multicultural Studies, and International Studies (15 credits), and Natural & Physical Sciences (7 credits) according to your catalog description.** One writing course (ENG 122) has been pre-designated (3 credits); you must choose another writing course from LAC GT-CO2 (3 credits), but ENG 225 Communications on a Theme specifically offered for secondary majors is recommended. You are required to take a Natural & Physical Science course with a required lab (4 credits) and without a lab (3 credits). PSY 247 counts as a Social & Behavioral Sciences course (3 credits). The remaining LAC electives include: Arts & Humanities (6 credits), History (3 credits), plus 3 additional credits from any category. In order to complete the LAC with minimum credits, six total credits must be double counted as Multicultural Studies (3 credits) and International Studies (3 credits). Example courses that count as MS course are AFS 101, MUS 150, SOC 221 and SOC 237 and as IS courses are a foreign language, MIND 180, and PHIL 126.
- 2 MATH 102 Success in Mathematical Sciences is a recommended course.
- 3 Courses in **bold** are required Mathematical Science courses.
- 4 Courses in *italics* are required PTEP courses.

This program prepares students to teach mathematics, such as arithmetic, algebra, geometry, trigonometry, and mathematical analysis and application at the middle school level (grades 6-8). Graduates of this program are prepared and will be qualified for licensure to teach mathematics in grades 6-8 in the state of Colorado. The program also prepares students for graduate study in mathematics education.

| *Liberal Arts Curriculum Course Indicators | | | |
|---|--|------|------------------------------------|
| LAA1 | Arts & Humanities: Arts & Expression | LAIS | International Studies |
| LAA2 | Arts & Humanities: Literature & Humanities | LAMS | U.S. Multicultural Studies |
| LAA3 | Arts & Humanities: Ways of Thinking | LAS1 | Natural & Physical Sciences |
| LAA4 | Arts & Humanities: World Languages | LASL | Natural & Physical Sciences LAB |
| LAB1 | Social & Behavior Sciences: Economic or Political Systems | LAW1 | Introductory Written Communication |
| LAB2 | Social & Behavior Sciences: Geography | LAW2 | Intermediate Written Communication |
| LAB3 | Social & Behavior Sciences: Human Behavior, Culture or Social Frameworks | LAW3 | Advanced Written Communication |
| LAH1 | History | LAX1 | Mathematics |