

**Bachelor of Science in Mathematics**  
**Freshman Curriculum Planning Guide and Four-Year Plan**  
**Fayetteville State University**  
**(2019-2020)**

| University College Core Curriculum (39 Credits)                                                                                                                                                                                                                                                                                                                                                 | Course                                    | Cr. | Term | Grade |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----|------|-------|
| <b>Transitional Studies – University Studies (2 Credits)</b> <sup>1</sup><br><i>Select one option from (UNIV 101/102) or UNIV 110 or UNIV 111 or UNIV 112</i>                                                                                                                                                                                                                                   |                                           | 2   |      |       |
| <b>Transitional Studies – Life Skills (2 Credits)</b><br><i>Select two credits from the following: ENTR 100 or FINC 100 or GEOG 110 or HEED 112 or HEED 113 or PEDU 101 or PEDU 107 or PEDU 112 or PEDU 120 or PEDU 122 or PEDU 130 or PEDU 132 or PEDU 140</i>                                                                                                                                 |                                           | 2   |      |       |
| <b>Communication Skills – Written Communication (3 Credits) – ENGL 110</b>                                                                                                                                                                                                                                                                                                                      | ENGL 110                                  | 3   |      |       |
| <b>Information Literacy (3 Credits) – ENGL 120</b>                                                                                                                                                                                                                                                                                                                                              | ENGL 120                                  | 3   |      |       |
| <b>Communication Skills – Oral Communication (3 Credits)</b><br><i>BADM 215 or SPEE 200</i>                                                                                                                                                                                                                                                                                                     | BADM 215 or<br>SPEE 200                   | 3   |      |       |
| <b>Reasoning Skills – Critical Thinking (3 Credits)</b> <sup>2</sup><br><i>Select one from the following: PHIL 110 or PHIL 220</i>                                                                                                                                                                                                                                                              | PHIL 110 or PHIL<br>220                   | 3   |      |       |
| <b>Reasoning Skills – Quantitative Reasoning (3 Credits)</b> <sup>3</sup><br><i>Select one from the following: MATH 129 and MATH 130 or MATH 131</i>                                                                                                                                                                                                                                            | MATH 131 (or<br>MATH 129 and<br>MATH 130) | 3   |      |       |
| <b>Scientific Literacy – Natural Sciences (8 Credits)</b> <sup>4</sup><br><i>Select from the following:<br/>(BIOL 150 and BIOL 150L and BIOL 160 and BIOL 160L) or (CHEM 141 and CHEM 141L and CHEM 161 and CHEM 161L) or (PHYS 125 and PHYS 125L and PHYS 126 and PHYS 126L)</i>                                                                                                               |                                           | 4   |      |       |
|                                                                                                                                                                                                                                                                                                                                                                                                 |                                           | 4   |      |       |
| <b>Scientific Literacy – Social Sciences (3 Credits)</b><br><i>CRJC 210 or ECON 211 or ECON 212 or GEOG 210 or HIST 212 or HIST 271 or POLI 200 or POLI 210 or POLI 220 or ENEC 270 or PSYC 210 or SOCI 210</i>                                                                                                                                                                                 |                                           | 3   |      |       |
| <b>Humanities and Creative Arts (3 Credits)</b><br><i>Select one from the following: ART 210 or COMM 220 or ENGL 220 or ENGL 223 or ENGL 240 or ENGL 250 or ENGL 253 or HIST 210 or HUMN 211 or HUMN 212 or HUMN 213 or HUMN 215 or MUSI 210 or MUSI 225 or MUSI 260 or PHIL 210 or RELI 215 or THEA 203</i>                                                                                    |                                           | 3   |      |       |
| <b>Global Literacy (3 Credits)</b> <sup>5</sup><br><i>Select one from the following: ANTH 210 or ART 150 or ART 215 or BADM 210 or CHIN 110 or CHIN 120 or ENGL 211 or ENGL 212 or FREN 110 or FREN 120 or GEOG 220 or HIST 110 or HIST 120 or HIST 270 or PHIL 211 or POLI 230 or SOCI 150 or SPAN 110 or SPAN 112 or SPAN 120 or SPAN 122 or SPAN 211 or THEA 242 or YORU 110 or YORU 120</i> |                                           | 3   |      |       |
| <b>Ethics and Civic Engagement (3 Credits)</b><br><i>Select three credits from the following: BADM 220 or CRJC 203 or EDUC 211 or ENEC 210 or ENGL 232 or ENGL 233 or (ETCE 101/102/103) or ETCE 200 or GEOG 270 or HCM 200 or HIST 211 or PHIL 120 or PHIL 212 or PHIL 250 or PNUR 210 or POLI 150 or SPTM 210 or SWRK 220</i>                                                                 |                                           | 3   |      |       |

**Notes**

- UNIV 101-UNIV 102 required for all first-time students; UNIV 110 required for transfer students with fewer than 30 transfer credits. Students do not earn credit if requirement is waived. UNIV 111 may be required based on academic performance
- Not required for students with 60+ transfer credits. Students do not earn credit if requirement is waived
- MATH 121 may be required based on profile scores. Some core courses require a one-hour lab.
- At least one natural science class must include its associated lab. Some majors require two lab sciences, increasing requirement to 8 credits
- Not required for students with 30 or more transfer credits from a foreign institution. Students do not earn credit if requirement is waived.

| <b>Mathematics Program Requirements (81 Credits)</b>                                                                                                                                                                                                                                                                                                                      | <b>Course</b>      | <b>Cr.</b> | <b>Term</b> | <b>Grade</b> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------|-------------|--------------|
| <b>Mathematics Courses (48 Credits):</b> MATH 142 and MATH 150 and MATH 241 and MATH 242 and MATH 251 and MATH 260 and MATH 262 and MATH 312 and MATH 331 and MATH 361 and MATH 300 or higher and MATH 412<br><b>AND</b> nine credits of MATH 400 or higher                                                                                                               | MATH 142           | 4          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           | MATH 150           | 3          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           | MATH 241           | 4          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           | MATH 242           | 4          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           | MATH 251           | 3          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           | MATH 260           | 3          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           | MATH 262           | 3          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           | MATH 312           | 3          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           | MATH 331           | 3          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           | MATH 361           | 3          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           | MATH 412           | 3          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           | MATH 300 or higher | 3          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           | MATH 400 or higher | 3          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           | MATH 400 or higher | 3          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           | MATH 400 or higher | 3          |             |              |
| <b>Other Course Requirements (17 Credits)</b><br>STAT 301 and three credits of STAT 302 or higher and CSC 120 and CSC 130 and three credits from CSC 200 or higher, or STAT 270 or higher                                                                                                                                                                                 | STAT 301           | 3          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           |                    | 3          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           | CSC 120            | 4          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           | CSC 130            | 4          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           |                    | 3          |             |              |
| <b>Restricted Electives: (10 Credits)</b><br>Select at least 10 credits in addition to the Scientific Literacy - Natural Sciences requirement and the other course requirements from the following:<br>BIOL 150-BIOL 499 or CHEM 141-CHEM 499 or CSC 200-CSC 499 or MATH 300-MATH 499 or PHYS 125-PHYS 499 or STAT 300-STAT 499 or ECON 200-ECON 499 or MATH 100-MATH 499 |                    | 3          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           |                    | 3          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           |                    | 4          |             |              |
| <b>Free Electives (6 credits)</b><br>Any 100 or 200 level course with C or higher                                                                                                                                                                                                                                                                                         |                    | 3          |             |              |
|                                                                                                                                                                                                                                                                                                                                                                           |                    | 3          |             |              |
| <b>Total Credits</b>                                                                                                                                                                                                                                                                                                                                                      |                    | 120        |             |              |
| <b>Transfer Credits</b>                                                                                                                                                                                                                                                                                                                                                   |                    |            |             |              |

**Other Program Requirements**

- 1 The mathematics major must complete a departmental comprehensive examination in the senior year.
- 2 Any student enrolled in a CSC or MATH course who does not meet the prerequisites for that course will be dropped.
- 3 Students must earn a grade of C or higher in all major courses and have a minimum GPA of 2.0.

## Four-Year Plan

This Plan illustrates how students can meet degree course requirements in four years. Some courses listed below may be taken in an alternate order. Courses fulfilling requirements are listed on the previous pages. For information about prerequisites and other program requirements, consult the appropriate Catalog Program of Study and an advisor. Students should work with advisor to create and update an individual plan in Degree Works.

| <b>Year 1 Fall</b>           |               |           |
|------------------------------|---------------|-----------|
| <b>Requirement</b>           | <b>Course</b> | <b>Cr</b> |
| University Studies           | UNIV 101      | 1         |
| Life Skills                  |               | 2         |
| Written Communication        | ENGL 110      | 3         |
| Critical Thinking            |               | 3         |
| Quantitative Reasoning       |               | 3         |
| Humanities and Creative Arts |               | 3         |
| Total:                       |               | 15        |

| <b>Year 1 Spring</b>              |               |           |
|-----------------------------------|---------------|-----------|
| <b>Requirement</b>                | <b>Course</b> | <b>Cr</b> |
| University Studies                | UNIV 102      | 1         |
| Information Literacy              | ENGL 120      | 3         |
| Social Sciences                   |               | 3         |
| Global Literacy                   |               | 3         |
| Calculus with Analytic Geometry I | MATH 142      | 4         |
| Discrete Mathematics              | MATH 150      | 3         |
| Total:                            |               | 17        |

| <b>Year 2 Fall</b>                |               |           |
|-----------------------------------|---------------|-----------|
| <b>Requirement</b>                | <b>Course</b> | <b>Cr</b> |
| Oral Communication                |               | 3         |
| Natural Sciences with lab         |               | 4         |
| Calculus with Analytic Geometry I | MATH 241      | 4         |
| Modern Geometry                   | MATH 262      | 3         |
| Intro to Programming Methodology  | CSC 120       | 4         |
| Total:                            |               | 18        |

| <b>Year 2 Spring</b>                |               |           |
|-------------------------------------|---------------|-----------|
| <b>Requirement</b>                  | <b>Course</b> | <b>Cr</b> |
| Calculus with Analytic Geometry III | MATH 242      | 4         |
| Linear Algebra                      | MATH 251      | 3         |
| Foundations of Mathematics          | MATH 260      | 3         |
| Program Design & Implementation     | CSC 130       | 4         |
| Total:                              |               | 14        |

| <b>Year 3 Fall</b>          |               |           |
|-----------------------------|---------------|-----------|
| <b>Requirement</b>          | <b>Course</b> | <b>Cr</b> |
| Natural Sciences with lab   |               | 4         |
| Differential Equations I    | MATH 331      | 3         |
| Advanced Calculus           | MATH 412      | 3         |
| Introduction to Probability | STAT 301      | 3         |
| Ethics and Civic Engagement |               | 3         |
| Total:                      |               | 16        |

| <b>Year 3 Spring</b>                    |               |           |
|-----------------------------------------|---------------|-----------|
| <b>Requirement</b>                      | <b>Course</b> | <b>Cr</b> |
| History of Mathematics                  | MATH 312      | 3         |
| MATH 300 or higher                      |               | 3         |
| STAT 302 or higher                      |               | 3         |
| CSC 200 or higher or STAT 270 or higher |               | 3         |
| Total:                                  |               | 12        |

| <b>Year 4 Fall</b>        |               |           |
|---------------------------|---------------|-----------|
| <b>Requirement</b>        | <b>Course</b> | <b>Cr</b> |
| Intro to Modern Algebra I | MATH 361      | 3         |
| MATH 400 or higher        |               | 3         |
| Restricted Elective       |               | 3         |
| Restricted Elective       |               | 3         |
| Free Elective             |               | 3         |
| Total:                    |               | 15        |

| <b>Year 4 Spring</b> |               |           |
|----------------------|---------------|-----------|
| <b>Requirement</b>   | <b>Course</b> | <b>Cr</b> |
| MATH 400 or higher   |               | 3         |
| MATH 400 or higher   |               | 3         |
| Restricted Elective  |               | 4         |
| Free Elective        |               | 3         |
| Total:               |               | 13        |