# Mathematics Major Checklist

**Core Courses:**
- MAT 129 Calculus I  
- OR  
- MAT 128 Calculus A  
- OR  
- MAT 229 Calculus II  
- OR  
- MAT 127 Calculus A  
- OR  
- MAT 228 Calculus C  
- MAT 194 Mathematical Sciences Seminar  
- MAT 234 Linear Algebra  
- STA 250 Probability and Statistics I  
- CSC 270 Mathematics Software Programming (or INF 260)  
- MAT 329 Multivariable Calculus  
- MAT 497 Mathematical Sciences Capstone  

**Elective Courses:**

### Pure Mathematics Track:
- MAT 302 Introduction to Higher Mathematics  
- OR  
- MAT 310 Elementary Theory of Numbers  
- OR  
- MAT 410 Abstract Algebra  
- MAT 420 Real Variables I  
- OR  
- MAT 430 Complex Variables  
- ONE 300 Level or above MAT/STA Course  
- TWO 400 Level MAT/STA Courses  

### Applied Mathematics Track:
- MAT 325 Differential Equations  
- TWO of:  
  - MAT 330 Classical Applied Analysis  
  - MAT 360 Numerical Analysis  
  - MAT 375 Applied Mathematical Models  
- THREE 300 level or above MAT/STA Courses  

### General Mathematics Track:
- MAT 302 Introduction to Higher Mathematics  
- OR  
- MAT 345 Introduction to Geometry  
- MAT 310 Elementary Theory of Numbers  
- OR  
- MAT 410 Abstract Algebra  
- STA 341 Statistics II  

**AND ONE OF THESE SEQUENCES OF COURSES:**
- STA 340 Probability II AND one other 300-level or above MAT/STA Course  
- MAT 325 Differential Equations AND MAT 330 Classical Applied Analysis  
- MAT 310 Elementary Theory of Numbers OR MAT 410 Abstract Algebra I AND one other 300-level or above MAT/STA course  
- Two 400-level MAT/STA courses  

A grade of 'C-' or better is required in each course applied to the major. At least 9 semester hours towards the major must be taken at NKU.

**The Double Major in Mathematics and Statistics:** A double major in mathematics and statistics consists of satisfying the degree requirements of both majors with a minimum of 58 credit hours of courses applicable to either major.