# Mathematics Major Checklist

## Core Courses:

- □ MAT 129 Calculus I  
  OR  
  □ MAT 128 Calculus A  
- □ MAT 229 Calculus II  
  OR  
  □ MAT 227 Calculus B  
- □ 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  
- □ 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  
- □ 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.*

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**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.