# Mathematics Major Checklist

## Academic Year 2018 - 2019

### Core Courses:
- MAT 129 Calculus I
- OR
- MAT 128 Calculus A
- MAT 229 Calculus II
- OR
- MAT 227 Calculus B
- 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 CSC 260)
- MAT 329 Multivariable Calculus
- MAT 489 Comprehensive Exam

### 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 OR MAT 430 Complex Variables
- THREE 300 level or above MAT/STA courses, including TWO 400 level courses, excluding MAT/STA 490/491

#### Applied Mathematics Track:
- CSC 270 Mathematics Software Programming
- OR (the one not chosen in Core)
- CSC 260 Object-Oriented Programming I
- MAT 325 Differential Equations
- TWO of:
  - MAT 330 Classical Applied Analysis
  - MAT 360 Numerical Analysis
  - MAT 375 Applied Mathematical Models
  - MAT 430 Complex Variables
  - MAT 483 Cryptology
- THREE 300 level or above MAT/STA courses, excluding MAT/STA 490/491

#### 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 310 Elementary Theory of Numbers OR MAT 410 Abstract Algebra AND one other 300-level or above MAT/STA course
- MAT 325 Differential Equations AND MAT 375 Applied Mathematical Models
- MAT 340 Probability II AND one other 300-level or above MAT/STA course
- Two 400-level MAT/STA courses, excluding MAT/STA 490/491

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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.

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