Associate in Science to Bachelor of Science in Mathematics with Secondary Education

Overview
Completion of the following curriculum will satisfy the requirements for the Associate in Science (AS) degree at a Kentucky Community and Technical College System (KCTCS) institution and leads to the Bachelor of Science (BS) in Mathematics with Secondary Education degree at Northern Kentucky University (NKU).

Applying to the KCTCS2NKU Program
Students can apply to participate in the pathway program by completing the online application on the NKU transfer webpage. Students must be enrolled in at least six credit hours at their KCTCS institution, enrolled in an associate degree program, plan to transfer to NKU, and maintain a minimum 2.0 cumulative GPA at their KCTCS institution.

Degree Requirements for KCTCS
1) Completion of minimum 60 credit hours, 2) minimum cumulative GPA 2.0, 3) minimum of 15 credit hours earned at the institution awarding the degree, 4) cultural competence course, 5) demonstration of digital literacy, and 6) college success requirement.

Admission Requirements to NKU
Students completing an associate degree with a cumulative GPA of 2.0 or higher will be accepted into NKU.

In addition, students must meet the following requirements for admission into Education. Courses in parentheses are KCTCS course equivalencies.

- A minimum overall GPA of 2.75
- A minimum grade of “B” in CMST 101 (COM 181) and ENG 102 (ENG 102)
- A minimum grade of “C” in all other pre-admission courses and required EDU and EDS courses which include EDU 300 (EDP 202), EDU 305 (EDU 201), EDU 313 (EDU 204), and EDS 360 (EDP 203).
- Meet the entrance exam requirement through an approved combination of passing scores on the ACT and/or Praxis I Core Academic Skills for Educators exams
  - ACT Comp. 22 -OR-
  - Reading (ACT: 20 -or- Praxis I: 156) and
  - Eng./Writing (ACT: 18 -or- Praxis I: 162) and
- Mathematics (ACT: 19 -or- Praxis I: 150)
  ACT scores must be less than 5 years old at time of admissions semester
  - Pass criminal background check
  - 60 semester hours completed
  - An acceptable portfolio
  - A completed application to the Teacher Education program

**Degree Requirements for NKU**
To earn a bachelor’s degree at NKU, students must complete a minimum of 120 credit hours with at least 45 credit hours numbered 300 and above. In addition, at least 25% of the credit hours required for the degree and the last 30 credit hours must be completed at NKU. Students majoring in Education must maintain a GPA of 2.75 overall and in major courses and earn a minimum grade of C in all education courses. Students must meet the pre-requisites for each course. Students wishing to be certified to teach mathematics at the secondary level must complete the requirements for the B.A. in Secondary Education along with the requirements for a B.S. in Mathematics. No minor is required for this major.

**General Transfer Information**
Students must complete the online application to NKU. There is no application fee for students who are transferring from a KCTCS institution.

**KCTCS Scholars Award:** Students who are KY residents transferring directly from a KCTCS institution with at least 36 hours from that institution and minimum GPA of 3.0, were never enrolled as a degree-seeking student at NKU, and will be enrolled in at least 12 credit hours both fall and spring semester are eligible for a limited number of $2,500 annual scholarships ($1,250 per fall and spring). Students must gain admission to NKU by June 15 for fall and November 1 for spring to be eligible for a possible scholarship. Online accelerated programs are not eligible for the KCTCS Scholars Award.
## Category 1: KCTCS General Education Requirements

<table>
<thead>
<tr>
<th>KCTCS Course</th>
<th>Course or Category</th>
<th>Credits</th>
<th>NKU Course</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 101</td>
<td>Writing I (WC)</td>
<td>3</td>
<td>ENG 101</td>
<td></td>
</tr>
<tr>
<td>ENG 102</td>
<td>Writing II (WC)</td>
<td>3</td>
<td>ENG 102</td>
<td></td>
</tr>
<tr>
<td>COM 181</td>
<td>Basic Public Speaking (OC)</td>
<td>3</td>
<td>CMST 101</td>
<td></td>
</tr>
<tr>
<td>TBS XXX</td>
<td>Arts and Humanities (AH) Heritage</td>
<td>3</td>
<td>TBD XXX</td>
<td></td>
</tr>
<tr>
<td>TBS XXX</td>
<td>Arts and Humanities (AH) Humanities</td>
<td>3</td>
<td>TBD XXX</td>
<td></td>
</tr>
<tr>
<td>PSY 110</td>
<td>General Psychology (SB)</td>
<td>3</td>
<td>PSY 100</td>
<td></td>
</tr>
<tr>
<td>TBS XXX</td>
<td>Social &amp; Behavioral Sciences Course (SB) (other than PSY)</td>
<td>3</td>
<td>TBD XXX</td>
<td></td>
</tr>
<tr>
<td>TBS XXX</td>
<td>Natural Sciences (NS)</td>
<td>3</td>
<td>TBD XXX</td>
<td></td>
</tr>
<tr>
<td>TBS XXX</td>
<td>Natural Sciences with Lab (SL)</td>
<td>4</td>
<td>TBD XXX</td>
<td></td>
</tr>
<tr>
<td>MAT 175</td>
<td>Calculus I (QR)</td>
<td>5</td>
<td>MAT 129</td>
<td></td>
</tr>
<tr>
<td>MAT 185</td>
<td>Calculus II (QR)</td>
<td>5</td>
<td>MAT 229</td>
<td></td>
</tr>
</tbody>
</table>

**Subtotal General Education Courses** 38

TBS XXX means to be selected by KCTCS student.
TBD XXX means to be determined by NKU based on course selected.

For Social and Behavioral Sciences courses, two disciplines must be represented and different from those in the Arts and Humanities category.

## Category 2: KCTCS AS Requirements

<table>
<thead>
<tr>
<th>KCTCS Course</th>
<th>Course or Category</th>
<th>Credits</th>
<th>NKU Course</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 261</td>
<td>Introduction to Number Theory</td>
<td>3</td>
<td>MAT 310</td>
<td></td>
</tr>
<tr>
<td>MAT 285</td>
<td>Differential Equations</td>
<td>3</td>
<td>MAT 325</td>
<td></td>
</tr>
</tbody>
</table>

**Subtotal AS Requirement Courses** 6

## Category 3: KCTCS Electives

<table>
<thead>
<tr>
<th>KCTCS Course</th>
<th>Course or Category</th>
<th>Credits</th>
<th>NKU Course</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-Year Experience</td>
<td></td>
<td>0-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDU 201</td>
<td>Introduction to American Education</td>
<td>3</td>
<td>EDU 305 + EDU 300T</td>
<td></td>
</tr>
<tr>
<td>EDU 204</td>
<td>Technology in the Classroom</td>
<td>3</td>
<td>EDU 313</td>
<td></td>
</tr>
<tr>
<td>EDP 202</td>
<td>Human Development and Learning</td>
<td>3</td>
<td>EDU 300</td>
<td></td>
</tr>
<tr>
<td>EDP 203</td>
<td>Teaching Exceptional Learners in Regular Classrooms</td>
<td>3</td>
<td>EDS 360</td>
<td></td>
</tr>
<tr>
<td>MAT 275</td>
<td>Calculus III</td>
<td>4</td>
<td>MAT 329</td>
<td></td>
</tr>
</tbody>
</table>

**Subtotal Elective Courses** 16-19
**Total Associate Degree Hours** 60-63
Degree Requirement: One course must be selected from the KCTCS identified cultural competence course list in the KCTCS catalog.

**Northern Kentucky University**

**Category 4: NKU Major Requirements for the BS in Mathematics with Secondary Education**

<table>
<thead>
<tr>
<th>NKU Course</th>
<th>Course</th>
<th>Credits</th>
<th>KCTCS Course</th>
<th>Taken at KCTCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 104</td>
<td>Orientation: Education Profession/Program</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDU 300</td>
<td>Human Growth and Development</td>
<td>3</td>
<td>EDP 202</td>
<td>x</td>
</tr>
<tr>
<td>EDU 304 or EDU 354</td>
<td>Reading and Writing Across the Curriculum: Middle Grades or Read/Write Across Curriculum-Secondary</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDU 305</td>
<td>Introduction to Education</td>
<td>2</td>
<td>EDU 201</td>
<td>x</td>
</tr>
<tr>
<td>EDU 311</td>
<td>Admission Field Experience Secondary</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDU 313</td>
<td>Instructional Technology</td>
<td>3</td>
<td>EDU 204</td>
<td>x</td>
</tr>
<tr>
<td>EDU 316</td>
<td>Education in a Multicultural Society</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDU 319</td>
<td>Classroom Climate Management Secondary</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDU 324</td>
<td>Fundamentals of Secondary Education</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDU 325</td>
<td>Educational Assessment Secondary</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDU 333</td>
<td>Teaching Math in Secondary School</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDU 393</td>
<td>Secondary Field Experience I</td>
<td>2</td>
<td></td>
<td></td>
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<tr>
<td>EDU 396</td>
<td>Secondary Field Experience II</td>
<td>2</td>
<td></td>
<td></td>
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<tr>
<td>EDU 496</td>
<td>Clinical Experience Secondary</td>
<td>12</td>
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<td></td>
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<tr>
<td>EDS 324</td>
<td>Instructional Planning for Inclusive Secondary Classrooms</td>
<td>3</td>
<td>EDP 203</td>
<td>x</td>
</tr>
<tr>
<td>EDS 360</td>
<td>Students with Exceptionalities in School</td>
<td>3</td>
<td>EDP 203</td>
<td>x</td>
</tr>
<tr>
<td>PSY 100</td>
<td>Introduction to Psychology</td>
<td>3</td>
<td>PSY 110</td>
<td>x</td>
</tr>
<tr>
<td>CMST 101</td>
<td>Public Speaking</td>
<td>3</td>
<td>COM 181</td>
<td>x</td>
</tr>
<tr>
<td>ENG 102</td>
<td>Advanced College Writing</td>
<td>3</td>
<td>ENG 102</td>
<td>x</td>
</tr>
<tr>
<td>MAT 129</td>
<td>Calculus I</td>
<td>4</td>
<td>MAT 175</td>
<td>x</td>
</tr>
<tr>
<td>MAT 229</td>
<td>Calculus II</td>
<td>5</td>
<td>MAT 185 (with MAT 275)</td>
<td>x</td>
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<tr>
<td>MAT 329</td>
<td>Calculus III</td>
<td>4</td>
<td>MAT 275</td>
<td>x</td>
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<tr>
<td>MAT 234</td>
<td>Linear Algebra</td>
<td>3</td>
<td></td>
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<tr>
<td>MAT 302</td>
<td>Introduction to Higher Mathematics</td>
<td>3</td>
<td></td>
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<tr>
<td>MAT 489</td>
<td>Comprehensive Examination</td>
<td>0</td>
<td></td>
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<tr>
<td>STA 250</td>
<td>Probability and Statistics I</td>
<td>3</td>
<td></td>
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<tr>
<td>CSC 270 or CSC 260</td>
<td>Mathematics Software Programming or Object-Oriented Programming</td>
<td>3</td>
<td>CIT 238</td>
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<tr>
<td>MAT 345</td>
<td>Introduction to Higher Geometry</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STA 341</td>
<td>Statistics II</td>
<td>3</td>
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<tr>
<td>Select 2: MAT 310</td>
<td>Select two courses from the following:</td>
<td>6 MAT 261</td>
<td>(Need 3 cr)</td>
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</tr>
<tr>
<td>MAT 410</td>
<td>Elementary Theory of Numbers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAT 415</td>
<td>Group Theory</td>
<td></td>
<td></td>
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<tr>
<td>Select 1:</td>
<td>Select one course from the following:</td>
<td>3</td>
<td></td>
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<tr>
<td>NKU Course</td>
<td>Course</td>
<td>Credits</td>
<td>KCTCS Course</td>
<td>Taken at KCTCS</td>
</tr>
<tr>
<td>------------</td>
<td>---------------------------------------------</td>
<td>---------</td>
<td>--------------</td>
<td>---------------</td>
</tr>
<tr>
<td>MAT 360</td>
<td>Numerical Analysis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAT 420</td>
<td>Real Variables I</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAT 430</td>
<td>Complex Variables</td>
<td></td>
<td></td>
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<tr>
<td>MAT XXX</td>
<td>Select three additional hours of MAT or STA</td>
<td>3</td>
<td>MAT 285</td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>electives at the 300 level or above</td>
<td></td>
<td></td>
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<table>
<thead>
<tr>
<th>Subtotal Major Credit Hours at NKU</th>
<th>59</th>
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</thead>
<tbody>
<tr>
<td>Subtotal Major Credit Hours at KCTCS</td>
<td>39</td>
</tr>
<tr>
<td>Total Major Credit Hours</td>
<td>98</td>
</tr>
<tr>
<td>Total Baccalaureate Degree Credit Hours</td>
<td>120-122</td>
</tr>
</tbody>
</table>

Updated April 2023