

# TRANSFER PATHWAY GUIDE

# 2019-2020

Associate in Science to Bachelor of Science in Computer Science

## Overview

Completion of the following curriculum will satisfy the requirements for the Associate in Science degree at Gateway Community and Technical College and leads to the Bachelor of Science in Computer Science degree at Northern Kentucky University.

## Applying to the Gateway2NKU 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 Gateway CTC, enrolled in an associate degree program, plan to transfer to NKU, and maintain a minimum 2.0 cumulative GPA at Gateway CTC.

## Degree Requirements for GCTC

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 studies course, 5) demonstration of digital literacy, 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.

## 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 must have an overall GPA of 2.0 and meet all prerequisites for courses and requirements for the major including a grade of C- or better in each course counted toward the major. Students must complete a focus or minor as indicated on the pathway.

## General Transfer Information

Students must complete the online application to NKU. There is no application fee for students who are transferring from GCTC.

**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.

### GCTC AS TO NKU BS IN COMPUTER SCIENCE CHECKLIST

### Gateway Community and Technical College

#### Category 1: GCTC General Education Core Requirements (38 hours)

| **GCTC Course** | **Course or Category** | **Credits** | **NKU Course** | **Completed** |
| --- | --- | --- | --- | --- |
| ENG 101 | Writing I (WC) | 3 | ENG 101 |  |
| ENG 102 | Writing II (WC) | 3 | ENG 102 |  |
| TBS XXX | Oral Communication (OC) | 3 | TBD XXX |  |
| TBS XXX | Arts & Humanities (AH) – Heritage | 3 | TBD XXX |  |
| TBS XXX | Arts & Humanities (AH) – Humanities | 3 | TBD XXX |  |
| TBS XXX | Social & Behavioral Sciences Course (SB) | 3 | TBD XXX |  |
| TBS XXX | Social & Behavioral Sciences Course (SB) | 3 | TBD XXX |  |
| TBS XXX | Social & Behavioral Sciences Course (SB) | 3 | TBD XXX |  |
| TBS XXX | Natural Science Course with Lab (SL) | 4 | TBD XXX |  |
| MAT 171 | Precalculus (QR) | 5 | MAT 103 + MAT 119 |  |
| MAT 175 | Calculus I (QR) | 5 | MAT 129 |  |
|  | **Subtotal General Education Core Courses** | **38** |  |  |

TBS XXX means to be selected by GCTC student.

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

One of these courses must be selected from the KCTCS identified Cultural Studies course list, indicate by placing (CS) next to the course name in Category 1 or 2 table.

#### Category 2: GCTCS AS Requirements (8 hours)

| **GCTC Course** | **Course or Category** | **Credits** | **NKU Course** | **Completed** |
| --- | --- | --- | --- | --- |
| MAT 185 | Calculus II (QR) | 5 | MAT 227 |  |
| TBS XXX | Natural Science (NS) | 3 | TBD XXX |  |
|  | **Subtotal AS Requirement Courses** | **8** |  |  |

#### Category 3: GCTCS Electives (18 hours)

| **GCTC Course** | **Course or Category** | **Credits** | **NKU Course** | **Completed** |
| --- | --- | --- | --- | --- |
| FYE 105 | Achieving Academic Success | 3 | UNV 100T |  |
| CIT 105 OR OST 105 | Introduction to Computing OR  Introduction to Information Systems  (Fulfills Digital Literacy Requirement) | 3 | BIS 101 |  |
| CIT 144  CIT 145  CIT 147  CIT 148  CIT 149 | Choose One:  Python I  Perl I  Programming I: Language  Visual Basic I  Java I | 3 | INF 120 |  |
| CIT 170 | Database Design Fundamentals | 3 | INF 282 |  |
| CIT 155 | Web Page Development | 3 | INF 286 |  |
| CIT 238 | Android Programming I | 3 | CSC 260 |  |
|  | **Subtotal Elective Courses** | **18** |  |  |
|  | **TOTAL Associate Degree Hours** | **64** |  |  |

### Northern Kentucky University

#### Category 4: Major Requirements for BS in Computer Science

| **NKU Course** | **Course** | **Credits** | **GCTC Course** | **Taken at GCTC** |
| --- | --- | --- | --- | --- |
| INF 100 | Orientation to College of Informatics | 1 | Waived for students with AS degree |  |
| INF 120 | Elementary Programming | 3 | CIT 144 OR  CIT 145 OR  CIT 147 OR  CIT 148 OR  CIT 149 OR | x |
| INF 284 or  CIT 247 | Introduction to Networks and Data… OR  Networking Fundamentals  Recommend: CIT 247 for CIT Minor Req. | 3 |  |  |
| INF 286 | Introduction to Web Development | 3 | CIT 155 | x |
| CSC 260 | Object-Oriented Programming I | 3 | CIT 238 | x |
| CSC 350 | Database Programming | 3 |  |  |
| CSC 360 | Object-Oriented Programming II | 3 |  |  |
| CSC 362 | Computer Systems | 3 |  |  |
| CSC 364 | Data Structures and Algorithms | 3 |  |  |
| CSC 402 | Advanced Programming Methods | 3 |  |  |
| CSC 439 | Software Testing and Maintenance | 3 |  |  |
| CSC 440 | Software Engineering | 3 |  |  |
| CSC 460 | Operating Systems | 3 |  |  |
| CSC 485 | Theory of Computation | 3 |  |  |
| CSC 491 | Comprehensive Examination | 0 |  |  |
| CSC XXX | Select one 300/400-level CSC course not included above. (see catalog) | 3 |  |  |
| TBS XXX  TBS XXX | Select two CSC 400-level CSC courses not included above; only one of CSC 415 or CSC 416 may count towards this requirements. MAT 360 may count for either a 300-level or 400-level course. | 6 |  |  |
| MAT 128 | Calculus A | 3 | MAT 175 | x |
| MAT 227 | Calculus B | 3 | MAT 185 | x |
| MAT 228 | Calculus C | 3 |  |  |
| STA 250 | Probability and Statistics I | 3 |  |  |
| MAT 385 | Discrete mathematics | 3 |  |  |
|  | **Subtotal Major Credit Hours at NKU** | **49** |  |  |
|  | **Subtotal Major Credit Hours at GCTC** | **15** |  |  |
|  | **Total Major Credit Hours** | **64** |  |  |

**Category 5: Additional Requirements at NKU**

| **NKU Course** | **Course** | **Credits** | **GCTC Course** | **Taken at GCTC** |
| --- | --- | --- | --- | --- |
|  | **Subtotal Minor Credit Hours Taken at NKU** | **3-21** |  |  |
|  | **Subtotal Elective (300/400 level) Hours** | **0-6** |  |  |
|  | **Minimum Baccalaureate Degree Credit Hours** | **122** |  |  |

Note: In order to complete a B.S. degree in Computer Science at NKU, a student must complete a minor. A mathematics, computer information technology, or information systems minor would be a good choice. Category 6 tables below show the courses needed for the suggested minors. Students should discuss options for minors with an NKU advisor after transferring to NKU.

#### Category 6: Additional Requirements for Minor in Mathematics

| **NKU Course** | **Course** | **Credits** | **GCTC Course** | **Taken at GCTC** |
| --- | --- | --- | --- | --- |
| MAT 119 | Precalculus | 3 | MAT 171 | x |
| MAT 129 | Calculus A | 3 | MAT 175 | x |
| MAT 227 | Calculus B | 3 | MAT 185 | x |
| MAT 228 | Calculus C | 3 |  |  |
| MAT 234 | Linear Algebra | 3 |  |  |
| STA 250 | Probabilities and Statistics | 3 |  |  |
| MAT 385 | Discrete Math | 3 |  |  |
|  |  |  |  |  |
|  | **Additional Credit Hours for Mathematics Minor** (MAT 228, STA 250, and MAT 385 are required for the B.S. degree in Computer Science, so they are not counted as additional credit hours) | **3** |  |  |

#### Category 6: Additional Requirements for Minor in Computer Information Technology

| **NKU Course** | **Course** | **Credits** | **GCTC Course** | **Taken at GCTC** |
| --- | --- | --- | --- | --- |
| CIT 130 | Information Technology Fundamentals | 3 |  |  |
| CIT 271 or  CIT 371 | Windows Administration or  Unix Systems | 3 |  |  |
| INF 110 or  INF 120 or  CSC 260 | Elementary Programming | 3 | One of  CIT 144  CIT 145  CIT 147  CIT 148  CIT 149 | x |
| INF 284 | Introduction to Computer Networks | 3 |  |  |
| CIT XXX | Select one 300/400 level CIT course not listed above | 3 |  |  |
|  | Select 6 credit hours of INF, CIT, or CSC courses not included above | 6 |  |  |
|  | **Additional Credit Hours for Computer Information Technology Minor** (INF 120, INF 284 and six credits of CSC courses are required for the B.S. degree in Computer Science, so they are not counted as additional credit hours) | **9** |  |  |

#### Category 6: Additional Requirements for Minor in Information Systems

| **NKU Course** | **Course** | **Credits** | **GCTC Course** | **Taken at GCTC** |
| --- | --- | --- | --- | --- |
| INF 120 | Elementary Programming | 3 | One of  CIT 144  CIT 145  CIT 147  CIT 148  CIT 149 | x |
| INF 282 | Introduction to Databases | 3 | CIT 170 | x |
| INF 286 | Introduction to Web Development | 3 | CIT 155 | x |
| BIS 275 | Introduction to Business Analysis | 3 |  |  |
| BIS 300 | Management Information Systems | 3 |  |  |
| BIS 310 | Systems Analysis and Design | 3 |  |  |
| BIS 330 | IT Project Management | 3 |  |  |
| Select one:  BIS 305, BIS 357, BIS 380, BIS 382, BIS 384, BIS 402, BIS 420, BIS 430, BIS 435, BIS 440 | BIS Elective | 3 |  |  |
|  | **Additional Credit Hours for Information Systems Minor** | **15** |  |  |

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