# Information Technology Pathways Guide

This pathways guide for Information Technology is aligned with the VCCS Information Technology Common Curriculum (https://www.transfervirginia.org/content/vccs-information-technology-common-curriculum). It provides a recommended semester-by-semester sequence for completing this curriculum in preparation for transferring to a four-year institution to major in Information Technology. Information Technology falls under the Associate of Science in Science, and students completing this curriculum will be awarded a Science A.S.

## Before you begin…

You'll see in the sequencing below that there are spots where you'll need to make choices. These choices should be based on the recommendations that your intended transfer institution has published. You can search the Transfer VA Resource Center (https://www.transfervirginia.org/resources/) for your school's guide. If they have not posted one there, look on both the BRCC transfer advising pages and your school's website to see if additional information is posted there. Make sure you know the answers to the following:

- All Information Technology majors complete **Statistics (MTH 245)**. So far, all our four-year partners require **Calculus (MTH 261 or 263)** as well, so you'll see that in the guide too.
- Because of the Calculus, you should **make an appointment with an advisor to determine your math placement**. It is possible to place directly into Calculus I (MTH 263) on the basis of your high school coursework. Here are instructions for making an advising appointment (https://www.brcc.edu/student-support-services/make-an-appointment/). You can also reach out by emailing advising@brcc.edu.
- If you need to start in Precalculus, you can start in either MTH 167 or MTH 161. MTH 167 is compressed Precalculus and combines MTH 161 + MTH 162 into one semester. As it is possible to complete the math sequence in this pathway in two years starting from MTH 161, we recommend MTH 161 over MTH 167.
- Where you'll be looking closely at your school's guide will be for which **ITE, ITN, and CSC courses** they want you to complete.
- Finally, look closely at your school's transfer information for **additional requirements**. There should be enough free elective space in the degree to accommodate those requirements, just make sure everything is accounted for!

In the table on the next page, "UCGS" stands for Uniform Certificate of General Studies. The UCGS forms the General Education core of all the transfer degrees. Here is the list of UCGS courses in the current catalog (https://catalog.brcc.edu/programs-study/ucgselectives/index.html).

If you would like some help figuring it all out, make an appointment with an Academic Advisor!

## What do our local partners want?

We're checking in with our local partners and making notes. This section will be updated as more information becomes available!

### James Madison University (JMU)

- JMU has not yet posted a Transfer Virginia guide for this pathway, but you can find information on course choices on their [Information Technology major guide page](https://www.jmu.edu/transfer/snapshots/ssit.shtml) (https://www.jmu.edu/transfer/snapshots/ssit.shtml). MTH 245, MTH 263, and MTH 288 are all written into the sequenced guide already.
- JMU wants CSC 221 as the introductory programming course (taught with Python).
- They are fine with either ITN 100 or ITN 101 – BRCC is offering ITN 100 as a Spring course.
- For CSC and ITN electives, we are seeing recommendations come out for CSC 222, ITN 170, ITN 260, and ITN 262.

### George Mason University (GMU)

- GMU has not yet posted a Transfer Virginia guide for this pathway, but you can find information on course choices on their [https://transferguide.admissions.gmu.edu/ait-bs/](https://transferguide.admissions.gmu.edu/ait-bs/) (https://transferguide.admissions.gmu.edu/ait-bs/). This information is not yet aligned with the common curriculum, so you'll see some things that don't match precisely. ITE 119 no longer exists in the VCCS. Also, GMU allows for either MTH 261 or MTH 263, however, MTH 263 is needed as a prerequisite to MTH 288, so go with that.
- GMU wants ITP 120 as the introductory programming course (taught with Java). You'll need to get instructor permission to enroll in this course or you'll need to complete the prerequisite ITP 100.
- Some of GMU's current recommendations don't line up well with the Transfer VA common curriculum, and we expect them to change. Be alert to new guidance coming out, and reach out to GMU to discuss course choices.


## SSDL (Shared Services Distance Learning) and course offering information

BRCC supports most general education and introductory major classes year-round – if you need a History course or even Calculus I, you'll find sections running in the fall, spring, and summer. But as you get into courses that are more specialized for your major, you might see them scheduled only in the fall, or only in the spring. We may also use Shared Services Distance Learning (SSDL) to bring in online courses from other colleges. If you need a course that is tagged with "SSDL" you'll need to work with Academic Advising during registration to request that course.

- We are planning ITN 100 as a Spring offering but have not finalized this yet. If you need the course and are planning on graduating by Spring 2024, check with an advisor – we may need to find as SSDL.
- We are not currently planning on ITN 101 – if you are looking at a school that prefers ITN 101, make an appointment with an advisor to request SSDL.
- ITN 260 runs Fall only, while ITN 262 is offered both Fall and Spring.
- We are looking at developing ITN 170 but do not currently offer it. Please let an advisor know if you need this course and we will try to find it through SSDL.

# Sequenced curriculum - MTH 263 start

## First semester

| Course number | Course title | Credits | If there is a choice, what does your school require? |
|---|---|---|---|
| ENG 111 | College Composition I | 3 | |
| SDV (101 for STEM preferred) | Orientation for STEM transfer | 1 | |
| MTH 263 | Calculus I | 4 | |
| CSC 221 or ITP 120 | Intro to Problem Solving and Programming or Java Programming | 3-4 | |
| UCGS History | | 3 | |
| Total credits | | 14-15 | |

## Second semester

| Course number | Course title | Credits | If there is a choice, what does your school require? |
|---|---|---|---|
| ENG 112 | College Composition II | 3 | |
| ITN 100 (or ITN 101 (SSDL)) | Intro to Telecommunications (or Intro to Network Concepts) | 4 | |
| CSC 222 (or other IT requirement) | Object-Oriented Programming | 4 | |
| MTH 245 | Statistics I | 3 | |
| CST 100 or 110 | Principles of Public Speaking or Intro to Human Communication | 3 | |
| Total credits | | 17 | |

## Third semester

| Course number | Course title | Credits | If there is a choice, what does your school require? |
|---|---|---|---|
| UCGS Social and Behavioral Science | | 3 | |
| UCGS Natural Science | | 4 | |
| UCGS Humanities/Arts | | 3 | |
| Additional requirements or free A.S. Science electives | | 4 | |
| Total credits | | 14 | |

## Fourth semester

| Course number | Course title | Credits | If there is a choice, what does your school require? |
|---|---|---|---|
| UCGS Lit/Humanities/Arts | | 3 | |
| MTH 288 | Discrete Mathematics | 3 | |
| Additional requirements or free A.S. Science electives | | 9 | |
| Total credits | | 15 | |

The above plan shows 60 - 61 total credits. A minimum of 60 credits is needed to complete the A.S. Science program. If you already have credit for Precalculus (MTH 161+162 or MTH 167) those credits will count towards your electives total, and you'll have less to take at the end.

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# Sequenced curriculum - MTH 161 start

### First semester

| Course number | Course title | Credits | If there is a choice, what does your school require? |
|---|---|---|---|
| ENG 111 | College Composition I | 3 | |
| SDV (101 for STEM preferred) | Orientation for STEM transfer | 1 | |
| MTH 161 | Precalculus I | 3 | |
| CSC 221 or ITP 120 | Intro to Problem Solving and Programming or Java Programming | 3-4 | |
| UCGS History | | 3 | |
| Total credits | | 13-14 | |

### Second semester

| Course number | Course title | Credits | If there is a choice, what does your school require? |
|---|---|---|---|
| ENG 112 | College Composition II | 3 | |
| ITN 100 (or ITN 101 (SSDL)) | Intro to Telecommunications (or Intro to Network Concepts) | 4 | |
| CSC 222 (or other IT requirement) | Object-Oriented Programming | 4 | |
| MTH 162 | Precalculus II | 3 | |
| CST 100 or 110 | Principles of Public Speaking or Intro to Human Communication | 3 | |
| Total credits | | 17 | |

### Third semester

| Course number | Course title | Credits | If there is a choice, what does your school require? |
|---|---|---|---|
| Additional requirements or free A.S. Science electives | | 4 | |
| UCGS Natural Science | | 4 | |
| UCGS Humanities/Arts | | 3 | |
| MTH 263 | Calculus I | 4 | |
| Total credits | | 15 | |

### Fourth semester

| Course number | Course title | Credits | If there is a choice, what does your school require? |
|---|---|---|---|
| UCGS Lit/Humanities/Arts | | 3 | |
| UCGS Social and Behavioral Science | | 3 | |
| MTH 288 | Discrete Mathematics | 3 | |
| MTH 245 | Statistics I | 3 | |
| Additional requirements or free A.S. Science electives | | 3-4 | |
| Total credits | | 15-16 | |

The above plan shows 60 - 62 total credits. A minimum of 60 credits is needed to complete the A.S. Science program.

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