



M.S. Computer Science: Information Technology Requirements

The Master of Science in Information Technology allows students to build a knowledge base for application support in any industry, from healthcare to sports, from retail to government. No organization can function without employees who have the skills and credentials of an IT professional. You can become one of those most sought-after experts by building a foundation of knowledge in the three key areas: networking, security and databases.

Note that all students must achieve 30 graduate credits and a minimum 2.0 overall GPA to graduate.

Required MS CS Information Technology Core Courses – 3 credits

CPSC 441 Advanced Information Security

Foundational Courses – 12 to 27 credits

CPSC 411 Networking I (3 credits)
CPSC 456 Database Management Systems I (3 credits)
CPSC 458 Data Mining & Pred. Analytics I (3 credits)
CPSC 459 Introduction to Big Data (3 credits)
CPSC 464 Human Computer Interaction (3 credits)
CPSC 510 Advanced Operating Systems (3 credits)
CPSC 512 Network Architecture & Protocols (3 credits)
CPSC 523 Advanced Scripting for Data Science (3 credits)
CPSC 541 Network Security (3 credits)
CPSC 552 Advanced UNIX Programming (3 credits)
CPSC 554 Project Management (3 credits)
CPSC 555 Applied Cryptography (3 credits)
CPSC 556 Database Management Systems II (3 credits)
CPSC 558 Data Mining & Pred. Analytics II (3 credits)

Elective Courses – 0 to 12 credits

Non-thesis students may take 12 hours of elective courses.

Depth Component Requirement

Choose at least two courses (one or more 500-level) from one depth area.

Networking	411, 512, 541
Database Systems	456, 556
IT Systems & Management	510, 554
Data Science	458, 459, 523, 558
Security	441, 541, 555

Thesis – 0 to 6 credits

CPSC 599 1st Term
CPSC 599 2nd Term

Notes:

- 1. Candidates for the MS degree in Computer Science must complete a total of 30 credits, selected in consultation with your advisor. A candidate must complete all degree requirements for the MS within six (6) calendar years after acceptance into the program.*
- 2. Students may elect for the thesis option, which requires the completion of 24 credits of courses and 6 credits of thesis. Students who do not complete a thesis must complete the Program of Study Summary (POSS), a written report that provides a narrative, backed by evidence, that the student has fulfilled specific student learning outcomes in the program.*
- 3. All programs will require at least 15 hours of 500-level courses in their major, which can include 6 hours of CSC 599 for students electing the thesis option. No more than five 400-level courses may be taken for graduate credit.*
- 4. Students must complete at least one in-depth component in their program. (see depth component requirement above).*
- 5. Selected topics CPSC 480 and CPSC 580 are classified as foundational, or elective based upon the specific topic.*

Program Plan Code: MS_CPSC_ITEC

Effective Date: Spring 2022