



**Application for Combined Bachelor's & Master's Degree:
 Mathematics OR Computer and Information Sciences**

1. _____
 CWID Degree Program **Current Term**
2. _____
 Last Name First Name Middle / Maiden Name
3. _____
 Street / Apartment City State / Zip Code
4. _____
 Email (Please Print Clearly) Home or Cell Phone Number
5. _____
 Total Undergraduate Credits (60 min. for CSCI; 75 min. for MATH) Major GPA (3.5 min.)

TERM COURSE TAKEN	GRADUATE COURSE NUMBER AND TITLE	UNDERGRADUATE COURSE REPLACED

 Student Signature

 Date

 Program Director Signature

 Date

 Graduate School Dean Signature

 Date

GSO & REGISTRAR STAFF ONLY	
GSO Processed by: _____	Date: _____
Registrar Processed by: _____	Date: _____

Computer and Information Sciences Course Substitution Map, Update November 9, 2018

A 4+1 student can take a course from the column on the left; it will count in their undergraduate transcript as the course on the right.

Graduate Course	Undergraduate Course
CSIS 618: Principles of Programming Languages	CSCI 320: Programming Language Concepts
CSIS 601: Data Modeling and Database Design	CSCI 332: Database Concepts
CSIS 602: Foundations of Software Engineering	CSCI 362: Software Engineering
CSIS 672: Human Computer Interaction	CSCI 380: User Interface Development
CSIS 612: Advanced Computer Architecture. (Prerequisite: CSCI 350)	CSCI 450: Architecture of Advanced Computer Systems
CSIS 616: Automata Theory	CSCI 410: Automata and Formal Languages
CSIS 632: Data Communication and Networking	CSCI 440: Computer Networks
CSIS 674: Introduction to Computer Graphics	CSCI 480: Principles of Computer Graphics

A 4+1 student can take any of the courses below; it will count as **CSCI 490** in their undergraduate transcript.

CSIS 603: Object-Oriented Design Patterns
CSIS 604: Distributed Computer Systems Architecture
CSIS 614: Advanced Operating Systems (Prerequisite: CSCI 340 or 604)
CSIS 631: Principles of Computer Security
CSIS 634: Project Change and Management
CSIS 638: Advanced Topics in Database Systems (Prerequisite: CSCI 332 or CSIS 601 or 604)
CSIS 641: Advanced Cybersecurity (Prerequisite: CSCI 345 or (CSIS 631 & 632))
CSIS 654: Software Requirements Analysis and Specifications (Prerequisite: CSCI 362)
CSIS 656: Software Systems Design and Implementation (Prerequisite: CSCI 362)
CSIS 658: Software Testing and Maintenance (Prerequisite: CSCI 362)
CSIS 659: Service-Oriented Computing
CSIS 690: Special Topics

Note: a student may count at most 12 credits of graduate work toward their undergraduate degree. A student may take at most 15 credits of graduate work as an undergraduate.