



Review your plan of study with your faculty advisor and then submit it via email to [csgrad@gmu.edu](mailto:csgrad@gmu.edu).  
Please refer to the [University Catalog](#) as the official source for policies and requirements.

\_\_\_\_\_  
Last Name, First Name

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G#

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GMU E-mail

*Note that the courses you list below will overlap in categories. For example, CS 583 falls under Core Courses, CS Courses, and Pre-Approved Courses.*

**REQUIRED COURSES** • All MS CS students are required to take CS 530 and CS 531. This requirement can be fulfilled by passing the classes, passing the corresponding test out exams, or if the program director approves a substitution request. *PhD and BAM students will not receive credit for CS 530 or CS 531 and should check the “N/A” box below.*

Course	Grade	Tested Out or Waived	N/A
CS 530 Mathematical Foundations of Computer Science		<input type="checkbox"/>	<input type="checkbox"/>
CS 531 Computer Systems & Fundamentals of Systems Programming		<input type="checkbox"/>	<input type="checkbox"/>

**CORE COURSES** • Choose three [core courses](#), including CS 583, from three different areas.

Course	Area	Grade
CS 583 Analysis of Algorithms	Theoretical Computer Science	

**ADVANCED COURSES** • Choose four advanced courses from two different areas. **Note:** If your catalog year is [2019-20](#) or earlier, you are required to take four advanced courses from *three* different areas.

Course	Area	Grade

**CS COURSES** • Six courses, including two advanced, must be designated CS.

1.	CS 583 Analysis of Algorithms	4.	
2.		5.	
3.		6.	

**PRE-APPROVED COURSES & ELECTIVES** • At least eight courses must be on the list of [pre-approved courses](#). Electives not on the pre-approved list can only be taken with prior approval from the program director. This section includes all ten classes used to fulfill your degree requirements.

1.	CS 583 Analysis of Algorithms	6.	
2.		7.	
3.		8.	
4.		9.	
5.		10.	

**CONCENTRATION (optional)** • In addition to the existing program requirements, MS CS students may choose a concentration in Cyber Security or Machine Learning. To declare your concentration, fill out the “Change of Concentration” section of the [Graduate Change of Program](#) form and submit it to [csgrad@gmu.edu](mailto:csgrad@gmu.edu).

**Cyber Security Concentration**

**Required:**  
**ISA 656** Network Security  
**ISA 562** Information Security Theory & Practice

**Choose 2-3 elective courses:**

- CS 587** Introduction to Cryptography
- ISA 564** Security Laboratory
- ISA 673** Operating Systems Security
- ISA 674** Intrusion Detection
- ISA 681** Secure Software Design & Programming
- ISA 763** Security Protocol Analysis
- ISA 764** Security Experimentation
- SWE 637** Software Testing

**Choose 0-1 related course:**

- CS 540** Language Processors
- CS 555** Computer Communications & Networking
- CS 571** Operating Systems
- CS 600** Theory of Computation
- CS 655** Wireless & Mobile Computing

**Thesis (optional)\***

**Machine Learning Concentration**

**Required:**  
**CS 584** Theory & Applications of Data Mining  
**CS 688** Machine Learning

**Choose 2-3 elective courses:**

- CS 657** Mining Massive Datasets with MapReduce
- CS 678** Advanced NLP
- CS 681** Instructable Cognitive Agents
- CS 747** Deep Learning
- CS 782** Advanced Machine Learning

**Choose 0-1 related course:**

- CS 580** Introduction to Artificial Intelligence
- CS 682** Computer Vision
- CS 685** Autonomous Robotics
- CS 687** Advanced Artificial Intelligence

**Thesis (optional)\***

\*If you are interested in pursuing the thesis option as part of your concentration, please contact [csgrad@gmu.edu](mailto:csgrad@gmu.edu).

	_____	_____
	Student Signature	Date
_____	_____	_____
Advisor	Signature	Date
_____	_____	_____
Program Director	Signature	Date