



CS 100 – Section 001

Instructors

Professor	Email	Office	Section (Meets face-to-face)
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College of Engineering and Computing
George Mason University
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Table of Contents

Section 1: Course Basics	3
1.0 Course Information	3
1.2 Instructor Information.....	3
1.3 Office Hours.....	3
1.4 Course Description	3
1.5 Student Learning Outcomes (SLO)	3
1.6 Mason Core Learning Outcomes (CLO)	3
1.7 Topics.....	3
1.8 Course pre-requisites/Co-requisites	4
1.9 Technical Competencies.....	4
1.10 Textbooks for the class (Both free)	4
1.11 Required Materials/Software/Hardware	4
1.12 Course Grading, Examination, & Grades Composition.....	4
1.13 Grading Scheme	5
Section 2: Course Rules and Policies	5
2.0 Assignments and Exams	5
2.1 Email Communication	5
2.2 Course Attempt Limits.....	6
2.3 Additional Course Policies and Expectations	6
2.4 Honor Code	6
Section 3: University Policies	6
3.0 Student Resources	6
3.1 Academic Standards.....	7
3.2 Accommodations for Students With Disabilities.....	7
3.3 FERBA and Use of GMU Email Address for Course Communication	8
3.4 Title X Resources and Required Reporting.....	8
3.5 Student Support Resources.....	8
3.6 Incomplete Grade.....	8
3.7 Campus Closure and Safe Return	8
Section 4: Mental Health	9
Section 5: The Seven Principles	9

Section 1: Course Basics

1.0 Course Information

Course	CS 100
CRN	17162
Format	Lecture
Section	001
Semester	Spring 2025, Jan 21 – May 14
Date/Time	TR: 10: – 11:45 AM
Location	Horizon Hall 2008

1.2 Instructor Information

Name	Ghada Abdelmoumin
Email/Phone	gabdelmo@gmu.edu / (703) 993 -1152
Office	ENGR 4439

1.3 Office Hours

Day	Wednesday
Time	2:00 – 4:00 PM
Location	ENGR 4439

* Outside of the faculty office hours, the students can post questions or ask for help using the Piazza discussion board.

1.4 Course Description

This course is intended to help students learn to think in the manner necessary to fully grasp the nature and power of the digital world around us. The early era of the Internet and the personal computer led to the need for "computer literacy." Now the changing nature of our global society requires that students learn new ways to think about problems and how to solve them, regardless of students' specific fields of endeavor. Through this course, students will explore major issues related to the "big ideas" of computational thinking (namely, Creativity, Abstraction, Data, Algorithms, Programming, Internet, and Societal Impact), as well as how these issues will impact their future lives. (3 credits). *This course is part of the Mason Core curriculum and fulfills requirements for Information Technology and computing.*

1.5 Student Learning Outcomes (SLO)

Upon completing the course, the student will be able to:

1. Use technology to locate, access, evaluate, and use information, and appropriately cite resources from digital/electronic media.
2. Understand the core IT concepts in a range of current and emerging technologies and learn to apply appropriate technologies to a range of tasks
3. Understand many of the key ethical, legal, and social issues related to information technology and how to interpret and comply with ethical principles, laws, regulations, and institutional policies.
4. Understand the essential issues related to information security, how to take precautions and use techniques and tools to defend against computer crimes.
5. Recognize the significance of the "big ideas" of computational thinking.

1.6 Mason Core Learning Outcomes (CLO)

1. Understand the principles of information storage, exchange, security, and privacy and be aware of related ethical issues.
2. Become critical consumers of digital information; they will be capable of selecting and evaluating appropriate, relevant, and trustworthy sources of information.
3. Use appropriate information and computing technologies to organize and analyze information and use it to guide decision-making.
4. Choose and apply appropriate algorithmic methods to solve a problem.

1.7 Topics

- Representation of ideas with bits
- Basic Boolean logic
- Devices to implement logic functions

- Programming languages for data and action
- Primitive operations and abstraction
- Algorithms for work and play
- Communication between machines
- Computing security concepts
- Basic data analysis
- Impact of automation and communication on human societies
- Human and machine intelligence

1.8 Course pre-requisites/Co-requisites

None.

1.9 Technical Competencies

Basic CANVAS knowledge is assumed.

1.10 Textbooks for the class (Both free)

- W. Daniel Hillis, *The Pattern on the Stone: The Simple Ideas that Make Computers Work*; (available free online from the GMU University Libraries <https://ebookcentral-proquest-com.mutex.gmu.edu/lib/GMU/detail.action?docID=1826311>). You have to login to GMU central Authentication System (CAS), for example CANVAS, to access the book when you are off campus.
- Wentworth, Elkner, Allen, and Meyers, *How to Think Like a Computer Scientist: Learning with Python 3*; (available free online at <https://openbookproject.net/thinkcs/python/english3e/>).
- Additional external online resources (EOR) to be added as the course progresses to supplement the listed textbooks.

1.11 Required Materials/Software/Hardware

Student will need access to:

For Class - -

- Computer on which they can access Internet sites and install programs
- Internet Connection
- CANVAS – For course material, assignments, and assignment submission
- [Piazza](#) – for Q&A, discussion, and the UTA contact information

For Assignments - -

- Microsoft Word or some form of Word Processor
- Python <https://www.python.org/>
- Geany <https://www.geany.org/>
- For Hosting Website on mason.gmu.edu/~NetID
- <https://its.gmu.edu/knowledge-base/how-to-set-up-a-personal-site/>
- <https://its.gmu.edu/knowledge-base/how-to-upload-files-with-filezilla/>
- VPN <https://its.gmu.edu/service/virtual-private-network-vpn/>

There are computer labs on campus which provide this capability (Limited).

1.12 Course Grading, Examination, & Grades Composition

Your final grade is based on the following scale:

A+	(\geq 98.0%)	A	(\geq 92.0%)	A-	(\geq 90.0%)
B+	(\geq 88.0%)	B	(\geq 82.0%)	B-	(\geq 80.0%)
C+	(\geq 78.0%)	C	(\geq 72.0%)	C-	(\geq 70.0%)
D	(\geq 60.0%)				
F	(< 60.0%)				

1.13 Grading Scheme

Assignments	Category	Points	Weight
Participation	4 Lessons Learned Entries on CANVAS	100 (25 each)	10%
Homework	8 Homework Assignments	400 (50 each)	40%
Mini Exams	3 Mini-Exams	300 (100 each)	30%
Final Exam	One Exam	200	20%
	Total	1000	100%

Section 2: Course Rules and Policies

2.0 Assignments and Exams

- You may not use any Internet resources or AI tools, such as ChatGPT and Copilot, to write a paper, an essay, or solve a computational problem unless otherwise specified.
- It is extremely prohibited to copy answers to assignments questions found on the Internet.
- Your Homework is due electronically (via CANVAS) on the date as assigned by your instructor.
- You may resubmit as many times as you like up until the deadline. But only the most recent upload is graded.
- You may ask the UTA on Piazza if you need help to complete an assignment. You can ask to clarify an assignment requirement or understand a concept. You can send a private message (seen by professor and TA) or post public questions.
- For grade disputes, please contact the grader (the TA for Homework or the instructor for Exams) first via email. If the class does not have a TA, you can contact your instructor via email.
- You must initiate a dispute within a week of receiving your grade for the dispute to be considered.
- Late work is penalized -10% per day late, up to a maximum of 2 days. Thus, a Homework assignment submitted 1 day late which would have scored an 87% would instead receive a 77%. A Homework assignment 2 days late which would have scored an 87% will receive 67%, or a Homework assignment that would have received 45/50 (90%) would receive 35/50 (70%).
- An assignment which is more than 2 days late will not be accepted.
- A missed exam will result in a zero.
- Please contact the instructor as soon as possible if there are documented extenuating circumstances which affect your ability to complete an assignment or exam (you must contact the instructor PRIOR to the deadline of the assignment or exam).

2.1 Email Communication

- Students must use their Mason email account to receive important University information, including communications related to this class. I will not respond to messages sent from or send messages to a non-Mason email address. I expect all email to be written in a professional manner, please indicate your name and what course you are referring to in your email.
- Unless you have a confidential matter to discuss directly with the professor/TA, please do not email us directly -- use a Piazza post. HW help questions sent via email are of extremely low priority, as they were sent to the wrong place and will most likely be responded to with "please post on Piazza".
- Please give 48 hours for faculty to respond to email on weekdays. Emails sent on the weekend will be responded to on the following Monday/Tuesday.
- The use of computers is required in this class. During class, you will only be permitted to work on material related to the class. Engaging in activities not related to the course (e.g., gaming, email, chat, etc.) during class will result in a significant deduction of your participation grade.
- Activities and assignments in this course will regularly use the CANVAS learning system, available at <https://mymasonportal.gmu.edu/>. Students are required to have regular, reliable access to a computer with an

updated operating system and a stable broadband Internet connection (cable modem, DSL, satellite broadband, etc., with a consistent 1.5 Mbps [megabits per second] download speed or higher.

- All course materials posted to CANVAS or other course sites are private to this class; by federal law, any materials that identify specific students (via their name, voice, or image) must not be shared with anyone not enrolled in this class.
- Sharing of instructor-created materials, particularly materials relevant to assignments or exams, to public online “study” sites is considered a violation of Mason’s Honor Code. For more information, see the Office of Academic Integrity’s summary of information about online study sites.

2.2 Course Attempt Limits

- Beginning 2018, there is a limit of two graded attempts for this course. A W does not count as a graded attempt. Please see the University Catalog and consult with your academic advisor if you have any questions.

2.3 Additional Course Policies and Expectations

- The expectations of this course are for you to put in at least 5+ hours of work/week outside of class, to complete this course successfully.
- You are expected to treat the faculty and each other respectfully. I will treat you with respect and fairness.
- You are expected to come to class on time, participate in class and stay the full class period.
- Submitting assignments on time is expected of all students.
- All assignments must be submitted using CANVAS. *Emailed assignments will not be graded [*unless CANVAS is down and is not working and the assignment is due that day/time; in which case please email the assignment to timestamp it].
- Students must verify that the correct assignment has been submitted by the due date. Blank copies and incorrect file format assignments turned in will automatically receive a zero grade.
- No make-up for missed exams and/or missed assignments accepted except for documented mitigating circumstances. Example of a mitigating circumstance is death in immediate family, or student’s illness as verified by a physician. In such a case, you must notify me within 24 hours of the deadline.
- I will let you know what my assignment expectations are prior to work being assigned, and you are expected to turn in assignments on the due date as specified by me.
- Your grade is NOT based on how hard you work but based on how you have mastered the material.
- There will be no make-up or extra-credit assignments at the end of the semester; your grade should be a measure of your semester-long progress.

2.4 Honor Code

- The [University Honor Code](#) is upheld and supported by the [Office for Academic Integrity](#). Mason is an Honor Code university; please see the Office for Academic Integrity for a full description of the code and the honor committee process.
- The principle of academic integrity is taken very seriously, and violations are treated gravely.
- What does academic integrity mean in this course? Essentially this: when you are responsible for a task, you will perform that task. When you rely on someone else’s work in an aspect of the performance of that task, you will give full credit in the proper, accepted form.
- Another aspect of academic integrity is the free play of ideas. Vigorous discussion and debate are encouraged in this course, with the firm expectation that all aspects of the class will be conducted with civility and respect for differing ideas, perspectives, and traditions. When in doubt (of any kind) please ask for guidance and clarification. Here is a training module on the Honor Code if you’re interested: [student integrity training module](#)

Section 3: University Policies

3.0 Student Resources

- [Student Support Resources on Campus - Stearns Center for Teaching and Learning](#)
- The four policies below affect students in all courses at George Mason University. This Course Policy
- Addendum must be made available to students in all courses (see [Catalog Policy AP.2.5](#)).

3.1 Academic Standards

- Academic Standards exist to promote authentic scholarship, support the institution's goal of maintaining high standards of academic excellence, and encourage continued ethical behavior of faculty and students to cultivate an educational community which values integrity and produces graduates who carry this commitment forward into professional practice.
- As members of the George Mason University community, we are committed to fostering an environment of trust, respect, and scholarly excellence. Our academic standards are the foundation of this commitment, guiding our behavior and interactions within this academic community. The practices for implementing these standards adapt to modern practices, disciplinary contexts, and technological advancements. Our standards are embodied in our courses, policies, and scholarship, and are upheld in the following principles:
 - **Honesty:** Providing accurate information in all academic endeavors, including communications, assignments, and examinations.
 - **Acknowledgement:** Giving proper credit for all contributions to one's work. This involves the use of accurate citations and references for any ideas, words, or materials created by others in the style appropriate to the discipline. It also includes acknowledging shared authorship in group projects, co-authored pieces, and project reports.
 - **Uniqueness of Work:** Ensuring that all submitted work is the result of one's own effort and is original, including free from self-plagiarism. This principle extends to written assignments, code, presentations, exams, and all other forms of academic work.
- Violations of these standards—including but not limited to plagiarism, fabrication, and cheating are taken seriously and will be addressed in accordance with university policies. The process for reporting, investigating, and adjudicating violations is [outlined in the university's procedures](#). Consequences of violations may include academic sanctions, disciplinary actions, and other measures necessary to uphold the integrity of our academic community.
- The principles outlined in these academic standards reflect our collective commitment to upholding the highest standards of honesty, acknowledgement, and uniqueness of work. By adhering to these principles, we ensure the continued excellence and integrity of George Mason University's academic community.
- **Student responsibility:** Students are responsible for understanding how these general expectations regarding academic standards apply to each course, assignment, or exam they participate in; students should ask their instructor for clarification on any aspect that is not clear to them.

3.2 Accommodations for Students With Disabilities

- Disability Services at George Mason University is committed to upholding the letter and spirit of the laws that ensure equal treatment of people with disabilities. Under the administration of University Life, Disability Services implements and coordinates reasonable accommodations and disability related services that afford equal access to university programs and activities. Students can begin the registration process with Disability Services at any time during their enrollment at George Mason University. If you are seeking accommodations, please visit <https://ds.gmu.edu/> for detailed information about the Disability Services registration process. Disability Services is located in Student Union Building I (SUB I), Suite 2500. Email: ods@gmu.edu. Phone: (703) 993-2474.

- **Student responsibility:** Students are responsible for registering with Disability Services and communicating about their approved accommodations with their instructor in advance of any relevant class meeting, assignment, or exam

3.3 FERBA and Use of GMU Email Address for Course Communication

- The [Family Educational Rights and Privacy Act \(FERPA\)](#) governs the disclosure of [education records for eligible students](#) and is an essential aspect of any course. Students must use their GMU email account to receive important University information, including communications related to this class. Instructors will not respond to messages sent from or send messages regarding course content to a non-GMU email address.
- **Student responsibility:** Students are responsible for checking their GMU email regularly for course-related information, and/or ensuring that GMU email messages are forwarded to an account they do check.

3.4 Title X Resources and Required Reporting

- As a part of George Mason University’s commitment to providing a safe and non-discriminatory learning, living, and working environment for all members of the University community, the University does not discriminate on the basis of sex or gender in any of its education or employment programs and activities. Accordingly, all non-confidential employees, including your faculty member, have a legal requirement to report to the Title IX Coordinator, all relevant details obtained directly or indirectly about any incident of Prohibited Conduct (such as sexual harassment, sexual assault, gender-based stalking, dating/domestic violence). Upon notifying the Title IX Coordinator of possible Prohibited Conduct, the Title IX Coordinator will assess the report and determine if outreach is required. If outreach is required, the individual the report is about (the “Complainant”) will receive a communication, likely in the form of an email, offering that person the option to meet with a representative of the Title IX office.
- For more information about non-confidential employees, resources, and Prohibited Conduct, please see [University Policy 1202: Sexual and Gender-Based Misconduct and Other Forms of Interpersonal Violence](#). Questions regarding Title IX can be directed to the Title IX Coordinator via email to TitleIX@gmu.edu, by phone at 703-993-8730, or in person on the Fairfax campus in Aquia 373.
- **Student opportunity:** If you prefer to speak to someone confidentially, please contact one of Mason’s confidential employees in Student Support and Advocacy ([SSAC](#)), Counseling and Psychological Services ([CAPS](#)), Student Health Services ([SHS](#)), and/or the [Office of the University Ombudsperson](#).

3.5 Student Support Resources

- Student Support Resources on Campus: <https://stearnscenter.gmu.edu/knowledge-center/knowning-mason-students/student-support-resources-on-campus/>.
- ECE Peer Mentor Center: [Peer Mentor Center | College of Engineering and Computing \(gmu.edu\)](#)

3.6 Incomplete Grade

- Incomplete Grades: <https://chssundergrad.gmu.edu/other-forms/incompletes>.

3.7 Campus Closure and Safe Return

- Campus Closure due to Weather: If the campus closes or class is canceled due to weather or other concern, students should check CANVAS for updates on how to continue learning and information about any changes to events or assignments.
- Safe Return to Campus Statement: All students taking courses with a face-to-face component are required to follow the university’s public health and safety precautions and procedures outlined on the university Safe Return to Campus webpage (<https://www2.gmu.edu/safe-return-campus>).

Section 4: Mental Health

- What is listed on the syllabus are our/Mason's usual course policies. However, this is not a "usual" time. We fully understand that each of us may face new obstacles, or old obstacles in novel ways, during this time. Please communicate with us if such things are getting in your way in this class. **Our goal is to facilitate your growth and success in this strange and uncertain time;** we can only do that if you tell us what is happening.
- If you are experiencing feelings of anxiety, panic, depression, sadness during the semester, Student Health Services and Counseling and Psychological Services Offices (703-993-2380) provides a range of resources to assist and support you.
- Students can call (703-993-2831) or walk-in during open hours to schedule an appointment to talk with a health care provider. If you or someone you know experiences a mental health crisis or emergency, seek help immediately. Call 911 for local emergency services, the National Suicide Prevention Lifeline (1-800-273-8255), or text the Crisis Text Line (741-741) anytime.
- We believe we learn best when we can show up as whole and healthy people. To learn effectively we need to have basic security: a roof over our head, a safe place to sleep, a stable place to live, and enough food to eat. If you are struggling to meet any of these basic needs, visit our campus food pantry (<https://ssac.gmu.edu/patriot-pantry/>), or reach out to other Mason resources <https://learningservices.gmu.edu/campus-resources/>. Remember, asking for assistance and advocating for yourself is an important part of your collegiate experience. **YOU** are not alone.

Section 5: The Seven Principles

- Please remember these seven principles ---
 - 1) Knowledge is a privilege that is earned through hard work, challenge, and discomfort.
 - 2) Learning isn't about satisfying requirements; it's about living a satisfying life.
 - 3) When you are struggling, it's your responsibility to ask for help.
 - 4) Failure is the bedrock of learning, embrace your failures as opportunities.
 - 5) No one has the same learning or test-taking style.
 - 6) Teachers develop policies that apply to everyone. There are penalties for breaking the rules just as there are in the world outside of school.
 - 7) Teachers can only facilitate learning; education is something we accomplish for ourselves throughout a lifetime."

Source: <https://www.rootsofaction.com/avoiding-academic-entitlement-helping-youth-develop-realistic-expectations-for-college/>