The Department of Applied Information Technology
The Volgenau School of Information Technology & Engineering
George Mason University
4400 University Drive
Fairfax. VA 22030-4444

IT 103: Introduction to Computing

Course Syllabus

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Office Location:	Engineering Building, room 5503

Course Description

Introduction to Computing (3:1:2) This course, using both lecture and laboratory practice, introduces students to basic computer concepts in hardware, software, networking, computer security, programming, database, e-commerce, decision support systems, and other emerging technologies such as blogs, wiki, RSS, podcasting, and Google applications. Additional lectures examine social, legal, ethical issues including privacy, intellectual property, health concerns, green computing, and accessibility. Students learn techniques to search, evaluate, validate, and cite information found online. Widely used applications including word processing, spreadsheets, databases, presentation, and web development software are studied.

Prerequisites

Knowledge of high school algebra.

Mason Core Course

Almost no area of academic, professional, or personal life is untouched by the information technology revolution. Success in college and beyond requires computer and information literacies that are flexible enough to change with a changing IT environment and adaptable to new problems and tasks.

The purpose of the information technology requirement is to ensure that students achieve an essential understanding of information technology infrastructure encompassing systems and devices; learn to make the most of the Web and other network resources; protect their digital data

and devices; take advantage of latest technologies; and become more sophisticated technology users and consumers.

1. Students will be able to use technology to locate, access, evaluate, and use information, and appropriately cite resources from digital/electronic media.

2. Students will 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. Students will 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. Students will demonstrate the ability to communicate, create, and collaborate effectively using state-of-the-art information technologies in multiple modalities.

5. Students will understand the essential issues related to information security, how to take precautions and use techniques and tools to defend against computer crimes.

Objectives

After successful completion of the course, the students will be able to –

- Understand basic functions of computer hardware and software components including operating system functions
- Identify various networks (LAN, WAN, intranet), topologies (ring, bus, star), protocols (TCP/IP, SMTP, POP & IMAP, HTTP & HTTPS, DNS), media types (wire pair, coaxial cable, fiber optics, microwave, radio frequency, infra-red), and network hardware (router, hub, gateway)
- Know how to use search techniques (inclusion, exclusion, wildcards, phrase, Boolean search), evaluate the information found on Web pages (chat rooms, newsgroups, RSS, podcasting sites, Wikipedia, blogs), and cite electronic and printed references
- Understand computer viruses, biometric devices, encryption technique, digital signature, email filtering, firewall, and precautions on Web
- Understand ethical issues regarding copyright, software licenses, information privacy, intellectual property, content filtering, Spam, and laws enacted with regards to SPAM, children's protection on Web, electronic communication, and electronic theft
- Understand IT impact on society (health and environment)
- Design and create web pages using XHTML
- Create blogs and wikis
- Use different application programs like spreadsheet and database management systems
- Understand the fundamentals of system analysis, life cycle of a program development and programming languages, artificial intelligence, and e-commerce.

Credit by Examination

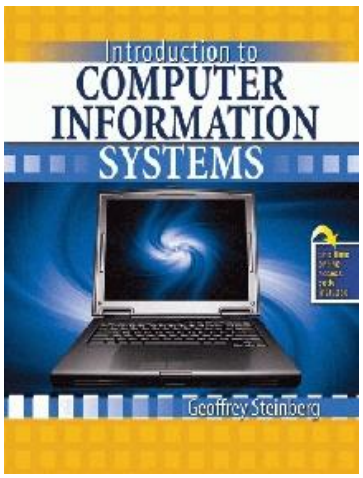
Students who think they already know the material in IT 103 should read the information on Credit

by Examination posted on http://ait.gmu.edu/students/current-students/course-credit-waiver-options/it-103-test-out/ web site.

Textbooks

There are two required textbooks for the course.

DO NOT buy used book of **Introduction to Computer Information Systems**, author: Steinberg. Used textbooks do not contain assessment code which is required in the course.



1. Kendal/Hunt **Introduction to Computer Information System**, 1st Edition. ISBN: 978-1-4652-7100-6 Steinberg (Author). Available at GMU bookstore.

   www.kendallhunt.com/intro_cis

2. Kendal/Hunt. **Fundamentals of Computing**, 3rd edition. ISBN: 978-0-7575-9640-7 Customized e-book, available at GMU bookstore and from the publisher's website –

   http://www.kendallhunt.com/sanghera

Grading

Grades will be awarded in accordance with the GMU Grading System for undergraduate students. See http://catalog.gmu.edu/content.php?catoid=22&navoid=4554 under Grading System for more information.

The grading scale for this course is:

97 – 100%	A+	Passing
93 – 96%	A	Passing
90 – 92%	A-	Passing
87 – 89%	B+	Passing
83 – 86%	B	Passing
80 – 82%	B-	Passing
77 – 79%	C+	Passing
73 – 76%	C	Passing
70 – 72%	C-	*Passing**
60 – 69%	D	*Passing**
0 – 59%	F	**Failing**

** Grades of "C-" and "D" are considered passing grades for undergraduate courses. However, a minimum grade of "C" is required in the BSIT program for any course that is a prerequisite for one or more other courses. This course is a prerequisite for several courses in BSIT program – see http://catalog.gmu.edu/preview_entity.php?catoid=19&ent_oid=2545 for more information on those courses.*

Raw scores may be adjusted by the Instructor to calculate final grades.

Final grades will be determined based on the following components:

Item	Points	Percent
In-class Exercises	100	10%
Project Part I (Research Paper)	150	15%
Project Part II (Web site)	150	15%
Lab In-lab Exercises and Homework Assignments	150	15%
Midterm Practice Test (conducted in lab)	25	2.5%
Final Practice Test (conducted in lab)	25	2.5%
Midterm Exam (conducted in lab)	200	20%
Final Exam (conducted in lab)	200	20%
Total Points	1000	100%

Students are responsible for checking the currency of their grade books. Grade discrepancies must be brought to instructor's attention within one week of assignment submission and 48 hours of exam submission.

Grading components are outlined in the following sections.

In-class Exercises

There will be seven (7) in-class exercises with the two (2) lowest grades being eliminated. Thus, only five (5) in-class exercises count in the overall grade for the course. **No makeups for any missed in-class exercises for any reason.**

Project Part I and II:

See the project page in the lecture Blackboard folder for details.

Lab Schedule

Lab schedule, assignments and their due dates are contained in the lab syllabus posted on lab Blackboard folder.

Midterm and Final Practice Tests

Midterm and final practice tests are conducted in lab. Their dates are included in the lab Blackboard folder. **Attendance in both practice tests is mandatory.**

Exams (midterm and final)

Both midterm and final exams are "**closed book"**. Exams are conducted in lab. You must bring your valid GMU ID to lab on the scheduled exam dates.

No makeups for missed exams for any reason.

Final grades will be posted to PatriotWeb, which is the only vehicle for students to obtain those grades. A student with a "hold" on his/her PatriotWeb account will be unable to access final grades until the hold has been removed by the Registrar.

Schedule

Week	Lecture/Topic	Lecture Reading Assignment
1	Introduction to the course Project part I: Research Paper review Library and Internet Research	Research paper specifications posted under Project's folder InfoGuide (http://infoguides.gmu.edu/it103)
2	Internet and WWW	Chapter 2
3	Hardware	Chapter 3
4	Software	Chapter 4
5	Data Communications and Networking	Chapter 5
6	**Project Part I: Research Paper Due** Midterm Exam Review	Review Sheet posted on Blackboard
7	***Midterm Exam (conducted in the Lab)***	
8	XHTML Project part II: Website review	Chapter 9
9	Systems Analysis Computer Programming	Chapter 6 Chapter 7
10	Database and SQL	Chapter 8
11	E-commerce **Project Part II: Website Due**	Chapter 10
12	Security, Ethics, and Privacy	Chapter 11
13	Artificial Intelligence Future of Computing Impact of Computing on Society	Chapter 12, 13 & 14
14	Final Exam – Review	Chapter Review Sheet posted on Blackboard
15	***Final Exam Thursday, May 7 at 7:30 pm in the lab***	

The reading assignment shown for each lecture is to be completed **prior to** that lecture.

This schedule is subject to revision before and throughout the course.

Important Dates

Spring 2015 semester calendar is available on the Office of the University Registrar's web site. Please view to this website for important dates and holidays - http://registrar.gmu.edu/calendars/spring-2015/

Religious Holidays

A list of religious holidays is available on the University Life Calendar page. Any student whose religious observance conflicts with a scheduled course activity must contact the Instructor **at least 2 weeks in advance** of the conflict date in order to make alternative arrangements.

Attendance Policy

Students are expected to attend each class, to complete any required preparatory work, and to participate actively in lectures, discussions and exercises. As members of the academic community, all students are expected to contribute regardless of their proficiency with the subject matter.

Students are expected to make prior arrangements with Instructor if they know in advance that they will miss any class and to consult with the Instructor as soon as possible if they miss any class without prior notice. Any student who expects to miss more than two class sessions is strongly advised to drop the course and take it in a later semester when he/she can attend every class.

Departmental policy requires students to take exams at the scheduled time and place, unless there are truly compelling circumstances supported by appropriate documentation. Except in such circumstances, failure to attend a scheduled exam will result in a score of zero (0) for that exam, in accordance with Mason policy on final exams. Students should not make travel plans or other discretionary arrangements that conflict with scheduled classes and/or exams. If the University is closed due to weather or other unforeseen conditions, final exams may be rescheduled – students are strongly advised not to make plans that would prevent them from attending exams that may be rescheduled during the entire exam period.

Classroom Conduct

Students are expected to conduct themselves in a manner that is conducive to learning, as directed by the Instructor. Any student who negatively impacts the opportunity for other students to learn will be warned – if disruptive behavior continues, the student will be asked to leave the classroom.

Communications

GMU e-mail is the preferred method of communication.

Students must use their MasonLIVE email account to receive important University information, including messages related to this class. Federal privacy law and GMU policy require that any communication with a student related in any way to a student's status be conducted using secure GMU systems.

Privacy

Instructors respect and protect the privacy of information related to individual students. Instructors will take every possible measure to protect the privacy of each student's submissions, scores and grades.

Disability Accommodations

Any student with a disability of any kind is strongly encouraged to register with The Office of Disability Services (ODS) (703.993.2474) as soon as possible and take advantage of the services offered.

Accommodations for disabled students **must** be made in advance – ODS cannot assist students retroactively, and at least one week's notice is required for special accommodations related to exams. Any student who needs accommodation should contact the Instructor during the first week of the semester so the sufficient time is allowed to make arrangements.

Honor Code

All members of the Mason community are expected to uphold the principles of scholarly ethics. The GMU Honor System and Code[1] will be strictly enforced in this course. Any use of the words or ideas of another person(s), without explicit attribution that clearly identifies the material used and its source in an appropriate manner, is **plagiarism** and will not be tolerated. Blackboard's SafeAssign tool is used to detect plagiarism in any work submitted by students for this course.

For this course, the following requirements are specified:

All assessable work is to be prepared by the individual student, unless the Instructor explicitly directs otherwise.

All work must be newly created by the individual student for this course for this semester. Any usage of work developed for another course, or for this course in a prior semester, is strictly prohibited without prior approval from the instructor.

Students may seek assistance with assigned work (and are encouraged to do so if they feel the need), **provided** the directions for the assigned work do not prohibit such assistance and assistance is acknowledged in the submitted work, clearly identifying the person(s) giving assistance and the nature of the assistance given.

Available Resources

VSE Peer Mentoring: Peer mentoring, http://volgenau.gmu.edu/undergraduates/peer-mentors
WRITING CENTER: A114 Robinson Hall; (703) 993-1200; http://writingcenter.gmu.edu
UNIVERSITY LIBRARIES "Ask a Librarian" http://library.gmu.edu/ask
COUNSELING AND PSYCHOLOGICAL SERVICES (CAPS): (703) 993-2380; http://caps.gmu.edu
INFOGUIDES: http://infoguides.gmu.edu/it103

[1] Available at www.gmu.edu/catalog/apolicies and related GMU Web pages.

