IT101 Introduction to Information Technology

Course Description: This course introduces the students to the fundamentals of various aspects of Information Technology (IT). It provides a working knowledge to IT terminology, processes that use IT, and the components found in telecommunications and computer systems that are used by IT professionals. The course material is discussed in the context of IT careers. For example, operating systems are introduced from the viewpoint of what a system administrator would need to know to improve performance versus what a computer science engineer would need to know to develop a new software algorithm.
Topics include Computer fundamentals, computer architecture, digital storage and data representation, networking, database management systems, system and application software, Internet and World Wide Web, and computer security.

Pre-requisites: None.

Instructor: Lori Watrous-deVersterre **Office:** GITC 3803 Suite, Room 3807
Phone: 973.596.5688 (**email preferred**)
Email: llw2@njit.edu **Please put IT101 and the course section in the subject of your email.** This will ensure I respond more quickly to your email.

Office Hours: See canvas course information for standard open office hours before finals or by appointment.

Tutoring: See canvas for ACM and YWCC (https://computing.njit.edu/tutoring) mentoring programs

Text: *New Perspectives Computer Concepts Comprehensive 21st Edition,* June Jamrich Parsons, McGraw Hill, 2023, ISBN-978-0-357-67461-1. **Note this is the "Complete" version and contains 11 Modules**.

This is a newer edition but mostly follows the previous edition (2018).

Canvas: Additional material and resources are found on the class website in Canvas, (https://canvas.njit.edu/). It will be modified and updated as the course progresses and should contain the most recent information.

Schedule: **The following is a tentative schedule and is subject to change. Refer to the class web page for the most recent information.**

Day	Topics	Reading Due
Week1 **1/23, 1/27**	**Course Information** • Discuss CS, IS & IT **Digital Content** • Digital Basics • Base systems, ascii, Parity • Digital Sound	Introduction Module 1: Digital Content
Week 2 **1/30, 2/3**	**Digital Content** • Bitmap & Vector Graphics • Digital Video **Computer Hardware** • Device Basics & Options • Processors & Memory	Module 2: Digital Devices: A, B, C
Week 3 **2/6, 2/10**	**Computer Hardware** • Storage • Input and Output – ports **Networks** • Network Basics & Model	Module 2: Digital Devices: D, E Module 3: Networks
Week 4 **2/13, 2/17**	**Networks** • The Internet & Access • Mobile & IoT • LAN • File Sharing	
	Software • Software Basics • Productivity Software	Module 6: Software
Week 5 **2/20, 2/24**	**Operating Systems** • File Management Utils	
Week 6 **2/27, 3/3**	**Application Software** • Languages • Classifications • Scripting	Module 11: Programming: B, C, D
Week 7.1 **3/6**	**Social Media** • Social Networking • Content Communities • Blogs & more • Online Communication • Social Media Values	Module 5: Social media
Week 7.2	**Midterm March 10th**	

Day	Topics		Reading Due
Week 8 **3/13, 3/24**	**World Wide Web** • Web Basics • Browsers	• HTML • HTTP • Search Engines	Module 4: The Web
Spring Break March 17-21			
Week 9 **3/27 3/31**	**World Wide Web** • Usability • Accessibility		
Wellness Day April 3rd – NO CLASS			
Last Day to Withdraw April 7th			
Week 10 **4/7, 4/10**	**Security and Privacy** • Basic Security • Malware	• Online Intrusions • Interception • Social engineering	Module 7: Security Module 9: Information Systems: E Module 11: Programming: E
Week 11 **4/14, 4/17**	**Ethical Computing** • ICT Industry, Laws & Ethics	**Databases** • Database Basics • Database Design	Module 8: The ICT Industry Module 10: Databases
Week 12 **4/21, 4/24**	**Databases** • Database Tools • SQL and Lab	**Artificial Intelligence** • Big Data	Module 10: Databases
Week 13 **4/28, 5/1**	**[e,m,p] Commerce** • Client Server Model • Front/Back-end	**Information Systems** • IS Basics • Enterprise Applications	Module 9: Information Systems: A, B
Week 14 **5/5, 5/6**	**Software Development** • System Analysis • Design & Implementation	**Game Design or Blockchain or "*Make a suggestion*"**	Module 9: Information Systems: C, D Module 11: Programming - Section A
Week of 5/12-5/16	**NO MAKE UP EXAMS WILL BE GIVEN** **Final Exam – time and place to be announced**		Study!

Grades: Final grades will be based on:

Midterm	25%	250 points
Final	28%	280 points
Class participation	5%	50 points
5 Homework	25%	250 points
Current Event Presentation	15%	150 points
Current Event Critic Participation	2%	20 points

Credit: 3

There is a total of 1000 possible points for the term. Grades are based solely on the points you earn.

A	900 -1000 points
B+	850 – 899 points
B	800 – 849 points
C+	750 – 799 points
C	700 – 749 points
D	600 – 699 points
F	0 - 599 points

I may curve up when assigning grades, but I will under no circumstances curve down. For example, you may earn an A if you have 898 points, but you will not earn lower than a B+ if you have 850 points. I will not assign incompletes unless there are extraordinary circumstances.

POLICIES:

Assignments (Homework and Project)

Homework for this class consists of 5 homework assignments. Their purpose is to help you keep up with the material and assess your readiness for the midterm and final.

Homework is usually due before midnight (**11:55 pm**) on the day specified on the schedule. It is submitted via Canvas electronically. Late homework is **not** accepted unless there is a reason beyond your control which you must discuss with the instructor. In most cases, homework is graded online and returned to you electronically via Canvas with comments and the grade posted on Canvas. I will also post the solutions online. Once solutions are posted, no homework, regardless of reason will be accepted. Submit homework as a **Word** or **PDF** document. **Handwritten assignments are not accepted except when outlined in the assignment.**

A **current event,** presented by each student, on changes in networking technology is required. This broad topic can cover protocols, hardware, or applications that are specific to networking technology. The assignment is designed to have you research and locate a recently published, professionally written, article that is relevant to networking technology today. The presenter must email to the instructor **96 hours (4days)** prior to the start of class the article, a summary of the article and any material they will use to describe the technology and query the class' response. The purpose of this assignment is to give you practice in presenting technical information in a clear and simply explained manner that can be disseminated to both technical and non-technical audiences. This is a crucial skill for an information technology professional to master to be effective in the business world. Further project details are provided in class and on Canvas.

Participation

I expect you to actively participate in class by asking questions and to come prepared to answer questions in class. It is important to have read the Chapter in advance of class. You will get more out of the class if you've spent time thinking about the material in advance. **This is a face-to-face class and attendance will be taken**. Labs and Discussion Boards are part of this grade.

I reserve the right to issue surprise quizzes at my discretion which will be included as part of the participation grade. This ensures you have done the readings and forces you to keep up with the material.

Makeup Tests and Assignments

Requests for makeup tests and assignment changes must be made **in advance** with the instructor and will only be approved if the reason is beyond your control.

Note: Calculators are not necessary and **not permitted** for exams in this course.

Academic Integrity Policy

"Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree to which you are working. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at: http://www5.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf.

Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. ***Any student found in violation of the code by cheating, plagiarizing, or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university.*** *If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu"*

All of your assignments must constitute original work. These assignments may **NOT** be done in collaboration with anyone else (unless otherwise approved). No credit will be given for any assignment that is copied—in part or in its entirety—from another person. **Both people involved will receive no credit.**

Note, however, that you may "talk" about assignments with each other, but such discussions must remain at a conceptual level. In summary, keep in mind:

- Do NOT ask to see another person's assignment, particularly a finished assignment.
- Do NOT pass your assignment around to other members of the class.
- Do NOT submit duplicate assignments. Even partially duplicate assignments will NOT be accepted.
- If the instructor is uncomfortable about your work's originality, no credit will be given.
- Do NOT submit an assignment used for previous assignments in this or other courses.

TURNITIN Policy

NJIT uses Turnitin.com, a service that helps prevent plagiarism on student papers. I will be using the Turnitin.com service at my discretion to determine the originality of student work. If I submit your work to Turnitin.com, it will be stored by Turnitin.com in their database as long as their service remains. If you object to this storage, **you must let me know no later than two weeks after the start of this semester.** Note, I may utilize other services and techniques to check for plagiarism and inappropriate AI usage.

AI Usage Policy

Policies for the usage of AI language model tools, such as ChatGPT, to generate new content are as follows:

- You must use AI-assisted tools for learning responsibly alongside your critical thinking and writing skills
- To generate content as a starting point to inform **your** work, brainstorm ideas, and prepare notes for **your** writings just as you do with your textbooks, library resources, and web materials.
  - AI-generated text in submitted assignments must use quotation marks and be appropriately cited.
  - Make sure the information provided is factual
- Such tools **must not write a significant portion** of your essays or assignments. This behavior is considered cheating.