

Fall 2023

IT 101 - 001, 005: Introduction to Information Technology

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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 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, computer security.

Pre-requisites: None.

Instructor: Lori Watrous-deVersterre

Email: llw2@njit.edu **Please put IT101 and course section in the subject of your email.** This will ensure I respond more quickly to your email.

Office: GITC 3803

Phone: 973.596.5688 (**email preferred**)

Office Hours: See canvas course information for standard open office hours prior to finals, or by appointment

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

Text: *New Perspectives Computer Concepts 2018*, June Jamrich Parsons, McGraw Hill, 2018, ISBN-978-1-305-95149-5. **Note this is the “Complete” version and contains 11 Modules.**

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 subject to change. Refer to class web page for most recent information.**

Day	Topics		Reading Due
Week1 9/6, 9/11	Course Information • Discuss CS, IS & IT	Digital Content • Digital Basics • Base systems, ascii, Parity • Digital Sound	Introduction Module 1: Digital Content
Week 2 9/13, 9/18	Digital Content • Bitmap & Vector Graphics • Digital Video	Computer Hardware • Device Basics & Options • Processors & Memory	Module 2: Digital Devices: A, B, C
Week 3 9/20, 9/25	Computer Hardware • Storage • Input and Output – ports	Networks • Network Basics & Model	Module 2: Digital Devices: D, E Module 3: Networks
Week 4 9/27, 10/2	Networks • The Internet & Access • Mobile & IoT	• LAN • File Sharing	Module 6: Software Module 11: Programming: B, C, D
	Software • Software Basics • Productivity Software		
Week 5 10/4, 10/9	Operating Systems • File Management Utils	Application Software • Languages • Classifications • Scripting	
Week 6 10/11, 10/16	Social Media • Social Networking • Content Communities	• Blogs & more • Online Communication • Social Media Values	Module 5: Social media
Week 7.1 10/18	World Wide Web • Web Basics • Browsers	• HTML • HTTP • Search Engines	Module 4: The Web
Week 7.2	Midterm October 23rd		
Week 8 10/25, 10/30	World Wide Web • Usability • Accessibility		Lab

Day	Topics	Reading Due	
Week 9 11/1, 11/6	Security and Privacy <ul style="list-style-type: none"> Basic Security Malware 	<ul style="list-style-type: none"> Online Intrusions Interception Social engineering 	Module 7: Security Module 9: Information Systems: E Module 11: Programming: E
Last Day to Withdraw November 13th			
Week 10 11/8, 11/13	Artificial Intelligence <ul style="list-style-type: none"> Big Data 	Ethical Computing <ul style="list-style-type: none"> ICT Industry Basics, Laws & Ethics Computer & Telecom Industry 	Module 8: The ICT Industry Project (paper& presentation) due 11/13
Week 11 11/15, 11/20	Presentations 11/15	Presentations 11/20	
Thanksgiving November 23rd			
Week 12 11/27, 11/29	Databases <ul style="list-style-type: none"> Database Basics Database Tools 	Databases <ul style="list-style-type: none"> Database Design SQL and Lab 	Module 10: Databases
Week 13 12/4, 12/6	[e,m,p] Commerce <ul style="list-style-type: none"> Client Server Model Front/Back-end 	Information Systems <ul style="list-style-type: none"> IS Basics Enterprise Applications 	Module 9: Information Systems: A, B
Week 14 12/11, 12/13	Software Development <ul style="list-style-type: none"> System Analysis Design & Implementation 	Game Design or Blockchain or ???	Module 9: Information Systems: C, D Module 11: Programming - Section A
Week of 12/17-12/23	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	30%	300 points
Class participation	5%	50 points
5 Homework	25%	250 points
Project & Presentation	15%	150 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. They are usually due about one week after being issued. 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 (**11:55pm**) 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 the grade posted in Canvas. Comments are usually embedded in the returned electronic document. I will also post the solutions online. Once solutions are posted, no homework, regardless of reason will be accepted. Homework will be submitted as a **Word** or **PDF** document. **Handwritten assignments are not accepted excepted when outlined in the assignment.**

A double spaced **typed** report constitutes the project portion of your final grade. A separate document with rubrics specifying the criteria is provided on Canvas. You may select an **information technology** topic of your

choice. Both the paper and any display material must be submitted via Canvas no later than **11:55pm the day before presentations start**. 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 in order to be effective in the business world. Further details on this project 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 some time thinking about the material in advance. This is a face-to-face class and attendance is expected and 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 that you are working on. 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 at all **uncomfortable about the originality of your work**, 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 papers. If I submit your paper to Turnitin.com, it will be stored by Turnitin.com in their database as long as their service remains in existence. If you object to this storage of your paper, **you must let me know no later than two weeks after the start of this class**. If you object to the storage of your paper on Turnitin.com, I will utilize other services and techniques to check your work for plagiarism.