

## 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.

**Office:** GITC 3901 D

**Instructor:** Mark Chiusano

**Phone:** 973.642.7106 (email preferred)

**Email:** [chiusano@njit.edu](mailto:chiusano@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 21<sup>st</sup> 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 9/4,	<b>Course Information</b> <ul style="list-style-type: none"><li>Discuss CS, IS &amp; IT</li></ul>	<b>Digital Content</b> <ul style="list-style-type: none"><li>Digital Basics</li><li>Base systems, ascii, Parity</li><li>Digital Sound</li></ul>	Introduction Module 1: Digital Content
Week 2 9/09, 9/11	<b>Digital Content</b> <ul style="list-style-type: none"><li>Bitmap &amp; Vector Graphics</li><li>Digital Video</li></ul>	<b>Computer Hardware</b> <ul style="list-style-type: none"><li>Device Basics &amp; Options</li><li>Processors &amp; Memory</li></ul>	Module 2: Digital Devices: A, B, C
Week 3 9/16, 9/18	<b>Computer Hardware</b> <ul style="list-style-type: none"><li>Storage</li><li>Input and Output – ports</li></ul>	<b>Networks</b> <ul style="list-style-type: none"><li>Network Basics &amp; Model</li></ul>	Module 2: Digital Devices: D, E Module 3: Networks
Week 4 9/23 9/25	<b>Networks</b> <ul style="list-style-type: none"><li>The Internet &amp; Access</li><li>Mobile &amp; IoT</li></ul>	<ul style="list-style-type: none"><li>LAN</li><li>File Sharing</li></ul>	
	<b>Software</b> <ul style="list-style-type: none"><li>Software Basics</li><li>Productivity Software</li></ul>		Module 6: Software Module 11: Programming: B, C, D
Week 5 9/30, 10/2	<b>Operating Systems</b> <ul style="list-style-type: none"><li>File Management Utils</li></ul>	<b>Application Software</b> <ul style="list-style-type: none"><li>Languages</li><li>Classifications</li><li>Scripting</li></ul>	
Week 6 10/7, 10/9	<b>Social Media</b> <ul style="list-style-type: none"><li>Social Networking</li><li>Content Communities</li></ul>	<ul style="list-style-type: none"><li>Blogs &amp; more</li><li>Online Communication</li><li>Social Media Values</li></ul>	Module 5: Social media
Week 7.1 10/14	<b>World Wide Web</b> <ul style="list-style-type: none"><li>Web Basics</li><li>Browsers</li></ul>	<ul style="list-style-type: none"><li>HTML</li><li>HTTP</li><li>Search Engines</li></ul>	Module 4: The Web
Week 7.2	<b>Midterm October 16<sup>th</sup></b>		

Week 8 10/21, 10/23	<b>World Wide Web</b> <ul style="list-style-type: none"> <li>• Usability</li> <li>• Accessibility</li> </ul>		Lab
<b>Day</b>	<b>Topics</b>		<b>Reading Due</b>
Week 9 10/28, 10/30	<b>Security and Privacy</b> <ul style="list-style-type: none"> <li>• Basic Security</li> <li>• Malware</li> </ul>	<ul style="list-style-type: none"> <li>• Online Intrusions</li> <li>• Interception</li> <li>• Social engineering</li> </ul>	Module 7: Security Module 9: Information Systems: E Module 11: Programming: E
Week 10 11/4, 11/6	<b>Ethical Computing</b> <ul style="list-style-type: none"> <li>• ICT Industry Basics, Laws &amp; Ethics</li> </ul>	<b>Databases</b> <ul style="list-style-type: none"> <li>• Database Basics</li> <li>• Database Design</li> </ul>	Module 8: The ICT Industry Module 10: Databases <b>Project (paper&amp; presentation) due 11/10</b>
<b>Last Day to Withdraw November 11<sup>th</sup></b>			
Week 11 11/11, 11/13	<b>Presentations</b>	<b>Presentations</b>	<b>Project (paper&amp; presentation) due 11/10</b>
Week 12 11/18, 11/20	<b>Databases</b> <ul style="list-style-type: none"> <li>• Database Tools</li> <li>• SQL and Lab</li> </ul>	<b>Artificial Intelligence</b> <ul style="list-style-type: none"> <li>• Big Data</li> </ul>	Module 10: Databases
<b>Thanksgiving Break November 28<sup>th</sup> – December 1<sup>st</sup></b>			
Week 13 11/25, 11/27	<b>[e,m,p] Commerce</b> <ul style="list-style-type: none"> <li>• Client Server Model</li> <li>• Front/Back-end</li> </ul>	<b>Information Systems</b> <ul style="list-style-type: none"> <li>• IS Basics</li> <li>• Enterprise Applications</li> </ul>	Module 9: Information Systems: A, B
Week 14 12/2, 12/4	<b>Software Development</b> <ul style="list-style-type: none"> <li>• System Analysis</li> <li>• Design &amp; Implementation</li> </ul>	<b>Game Design or Blockchain or ???</b>	Module 9: Information Systems: C, D Module 11: Programming - Section A
Week of 12/15-12/21	<b>NO MAKE UP EXAMS WILL BE GIVEN</b> <b>Final Exam – time and place to be announced</b>		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 (**11:55 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 the grade posted on 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 except 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 **11:55 pm 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 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 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](mailto: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.

## **USE OF AI**

An emerging related issue impacting all of us is the use of AI language models to generate new content, for example ChatGPT. The recommendation for this class on this subject is consistent with existing university policy on academic integrity.

It is fine to use AI-assisted tools for learning responsibly alongside your own critical thinking and writing skills. Such tools must not write your entire essays or assignments though. This kind of behavior is considered cheating and can result in serious consequences, including failing the assignment or the course, or even being expelled from the university.

Use generated 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. Also, there are instances when it may be necessary and appropriate to use text as written by others, including technology, which is acceptable when you include it within quotation marks and cite these sources in your work.