

**COURSE SYLLABUS**  
**CPS 120 – Introduction to computers**  
**Winter 2015**

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<b>Office Hours:</b>	Tuesday 12 – 2:00, 5 – 5:30, Wednesday 5:00 – 5:30, Thursday 9:30 – 10, 2 – 3:30				

**Course description:**

This course is an introduction to computer science for those planning to take advanced courses in the computer field. It is highly recommended for those planning to take programming courses. Students will write, enter, compile, and execute simple computer programs. The course is intended to bridge the gap between a basic computer literacy course and advanced courses.

**Pre-Requisite:** CIS 100, or CIS 110, or MTH 170, or High School Computer Course, or permission of instructor.

**Course objectives:**

**Unit 1**

1. Identify the basic components and functions of computer hardware.
2. Define vocabulary terms used in computer science.

**Unit 2** Internal representation of data

- # 1 Explain the binary number system and its use in the computer.
- # 2 Explain the hexadecimal number system and its use in the computer.
- # 3 Explain the representation of character data in computer storage.

**Unit 3** Programming concepts

- # 1 Describe the machine cycle used to process data in the computer.
- # 2 Explain the use of stored programs and compilers and interpreters.
- # 3 Describe the development of programs and the use of high level language

**Unit 4** Operating systems

- # 1 Perform the basic operations of a graphical user interface (GUI), including file management.
- # 2 Describe other popular operating systems, such as Linux, DOS, Windows XP, and their application.
- # 3 Describe the concepts of multitasking, multiprocessing, networking, and time-sharing.

**Unit 5** Programming languages and software

- # 1 Create algorithms to solve programming problems.
- # 2 Using correct syntax, write simple programs using the control; sequential, conditional, and iteration.

- # 3 Explain the concept of functions and arrays.
- # 4 Describe the basic data types and their use in declarations.

### **Unit 6 Databases**

- # 1 Describe the applications of a database.
- # 2 Explain the use of a structured query languages (SQL) to retrieve data fr database.
- #3 Describe procedures to ensure privacy and security when using database

### **Unit 7 Data communications**

- # 1 Describe how networking is used to send and receive data.
- # 2 Describe the role of security procedures to protect transmitted data.
- # 3 Explain the dangers of computer viruses and methods used to combat th
- #4 Build website using HTML and javascript

#### **TEXTBOOK RECOMENDED:**

- e-book

#### **ADDITIONAL REQUIREMENTS:**

Python software, (Microsoft Visual Studio, xCode, or any C++ compiler) and a storage device (Flash drive,...etc.).

#### **OTHER REQUIREMENTS:**

- You are expected to attend class.
- You will receive credit toward the final grade for each class you attend.
- If you arrive late after roll has been taken or leave early you will not receive credit for that class.
- Roll will be taken at the beginning of class.
- No late Homework will be accepted and you will receive an automatic ZERO.
- All work must be completed by the due date.
- If unforeseen problems arise, there will NOT be justification for giving extensions on work that is already overdue.
- An incomplete will only be given for emergencies that arise during the LAST WEEK of the semester and will not be given for failure to complete assignments when due or to allow a student to complete work to obtain a higher grade.
- DO NOT schedule other activities such as work, vacations, medical appointments, or job interviews during the scheduled class time.
- There will be some assignments covered in class that cannot be made up.

#### **Time required outside of class**

Students will be expected to spend approximately two (2) hours outside of class for each hour in class or six hours per week on studying, or in lab working on assignments. If you cannot devote this amount of time you should consider taking the course at a later date. This is a guide; some may find they will spend more or less time on individual assignments.

**LATE HOMEWORK:** Homework is due at the beginning of class on the assigned dates. Assignments turned in after the due date will not be accepted.

**MISSED TESTS:** No make up quizzes or tests will be given no matter what the missing reason was.

Evaluation	
Your final grade in the course will be based on the following:	
Assignments and labs	90 points
Midterm	45 points
Final Examination	60 points
Attendance	5 points

Scale	Grade
186 – 200	<b>A</b>
180 – 185	<b>A-</b>
176 – 179	<b>B+</b>
166 – 175	<b>B</b>
160 – 165	<b>B-</b>
156 – 159	<b>C+</b>
146 – 155	<b>C</b>
140 – 145	<b>C-</b>
136 – 139	<b>D+</b>
126 – 135	<b>D</b>
120 – 125	<b>D-</b>
Less than 120	<b>F</b>

### Accommodations

If you have a documented disability, contact Learning Support Services as soon as possible to discuss accommodations. Learning Support Services is in room LA 104.

## COURSE POLICIES

### **Student Conduct In Class Policy**

Any acts of classroom disruption that go beyond the normal rights of students to question and discuss with instructors the educational process relative to subject content will not be tolerated, in accordance with the Academic Code of Conduct described in the Student Handbook.

### **Children In Class Policy**

Only in extreme cases are children allowed in classroom or laboratory facilities, and then only with approval of the instructor prior to class.

## **Electronic Devices In Class Policy**

Cellular phones, pagers, CD players, radios, and similar devices are prohibited in the classroom and laboratory facilities. Calculators and computers are prohibited during examinations and quizzes, unless specified. Reasonable laptop-size computers may be used in lecture for the purpose of taking notes.

## **Cheating Policy**

The Board of Trustee Policy 4095 (available on the College web site) provides information on overall Student Rights, Responsibilities, and Conduct including Academic Dishonesty:

- Academic Dishonesty
- All forms of academic dishonesty including but not limited to collusion, fabrication, cheating, and plagiarism will call for discipline.
- Collusion is defined as the unauthorized collaboration with any other person in preparing work offered for individual credit.
- Fabrication is defined as intentionally falsifying or inventing any information or citation on any academic exercise.
- Cheating is defined as intentionally using or attempting to use unauthorized materials, information, or study aids in any academic exercise.
- Plagiarism is defined as the appropriation of any other person's work and the unacknowledged incorporation of that work in one's own work offered for credit.

The penalty for violating the honor code is severe. Any student violating the honor code is subject to receive a failing grade for the course and will be reported to the Office of Student Affairs. If a student is unclear about whether a particular situation may constitute an honor code violation, the student should meet with the instructor to discuss the situation.

## **Pregnant Students**

Pregnant students should contact the Ombudsman office ([ombudsman@wccnet.edu](mailto:ombudsman@wccnet.edu)) if they encounter medical situations that are impacting their class.

Pregnant students should contact Learning Support Services to discuss accommodations, if needed, during their pregnancy.

## **Safety & Security Update**

- Your safety and security is important to us. Here are some important safety tips for the upcoming semester. Also watch your WCC email for safety tips throughout the semester.
- Emergency Notification Service: We encourage you to sign up for the Emergency Notification Service in MyWCC. You will receive timely notifications if the College is closed due to weather or other emergency.
- Fire: If there is a fire or other reason a building needs to be evacuated, the fire alarm will ring. Exit the building using the nearest stairway. Do not use elevators.

Make sure you stay at least 150 feet from the building until the all clear signal is given.

- Tornado: If a tornado warning is issued for the WCC campus area, the tornado siren will activate outside and an emergency message will broadcast throughout campus. Please seek shelter in the closest room/area designated as a tornado shelter. If you are unable to find a marked tornado shelter, seek shelter in an inner hallway or restroom, away from exterior windows.
- Property Security: Do not leave laptop computers, smart phones, tablets or other valuables unattended. If parking on campus, roll up your windows, lock your doors and keep personal belongings out of sight.
- Call Campus Safety (734-973-3411 or 3411 from a College house phone) to report any suspicious activity or safety concern.

### **No Classes**

WCC does not hold classes on these dates during Winter semester:

No class Monday, January 19<sup>th</sup>, Martin Luther King Day

No class Monday-Saturday, February 24<sup>th</sup> – February 28<sup>th</sup>, Spring break

### **Important Deadlines**

15-Week Sessions starting week of 1/12/2015 until 5/04/2015

Deadline to drop: January 23<sup>rd</sup>, 2015

Last day to adjust schedule with Instructor permission OR change credit or audit status:

January 28<sup>th</sup>, 2015

## SEMESTER SCHEDULE

Week	Date	Topic/Activity	Hwk & Labs
Tuesday			
1	01/13/2015	Introduction, Algorithm Design, I/O	Lab 1
2	01/20/2015	Binary Numbers, Boolean Logic and Gates	Hwk 1 due, Lab 2
3	01/27/2015	Making Decisions	Hwk 2 due, Lab 3
4	02/03/2015	Loops and Repitition	Hwk 3 due, Lab 4
5	02/10/2015	Memory Management, Arrays	Hwk 4 due, Lab 5
6	02/17/2015	Process Management, review	Hwk 5 due
7	03/03/2015	<i>Midterm</i>	
8	03/10/2015	Relational Database	Lab 6
9	03/17/2015	Internet, html, WWW, Network	Hwk 6 due
10	03/24/2015	Algorithms	Hwk 7 due
11	03/31/2015	Introduction to C++	Lab 7
12	04/07/2015	Variables, Types, if statement in C++	Hwk 8 due, Lab 8
13	04/14/2015	Loops in C++	Hwk 9 due, Lab 9
<i>Thanksgiving holiday</i>			
14	04/21/2015	Arrays in C++, review	Hwk 10 due, Lab 10
15	04/28/2015	<i>Final Exam (Comprehensive)</i>	