MTH1112 Computer Science
Course Syllabus

COURSE REQUIREMENTS
Computer Science is an introductory course. Any student may enroll.

COURSE DESCRIPTION
This course is an introductory course and the assumption is that students have no prior programming experience. Different programming languages will be showcased, however the primary language we will delve into will be Python. Students will become familiar with how computers work, what goes into programming, and work on web development.

Computer Science aims to provide you with an understanding of how computation can aid in solving problems. You will be able to write a small program with a specific goal in mind. You will engage in activities that show how computing impacts daily lives and changes the world.

LEARNING OBJECTIVES
You will learn about computational thinking, problem solving, small-scale programming and applications. You will work with data, variables, functions, conditionals, loops, lists, sets and dictionaries. By the end of the course, all students should:
- Grasp the role computation can play in problem solving
- Be able to write a small program
- Read most Python code
- Indicate proficiency in basic programming constructs
- Demonstrate an understanding of the wide-spread application of computational thinking to real-world problems
- Describe common computing acronyms and terms
- Spell out steps to increase the security of information and the computer

ATTENDANCE
Attendance is mandatory for all students. Excellent attendance is imperative for mastery and application of the information dispensed. Whether you are sitting at a desk in a classroom or attending via Skype, your attendance is vital to your success. Late arrivals are distracting and disrespectful. Please refrain from being tardy.
Grades will be affected by absences and tardiness. Participation in class is a prerequisite. You learn from lectures, discussions and presentations.

CLASSROOM BEHAVIOR
Students are expected to treat all persons with respect. We should all conduct ourselves in a courteous and responsible manner. Be considerate, you can disagree, don't insult.

Please set all your electronic devices to silent during class so as not to be a disturbance to others in the class.

TUTORIAL ASSISTANCE

We maintain an open-door policy for our students. We are absolutely willing to discuss any matter that may arise during the course. If you have any questions, problems, or need help with the course material, we urge you to reach out as soon as the issue arises. If you want to contest a grade, you must do so within 48 hours and put it in writing. Please ask your student advocate for help. If you do not have a student advocate send an email to: tutordept@usilacs.org.

NON-DISCRIMINATORY STATEMENT

All students regardless of age, race, gender, religion, physical disability, class, etc., shall have equal opportunity without harassment in this course. Any problems with or questions about harassment can be discussed confidentially via email at: hr@usilacs.org.

DRESS CODE

For students enrolled who are attending in a classroom or via Skype, please be sure you are dressed modestly and respectfully. Please refer to www.merriam-webster.com/dictionary/business%20casual. NO short shorts or skirts. Avoid low-cut tops. We want to present ourselves in a dignified manner at all times.

NETIQUETTE

- Always read through all the comments of the class before responding. This will avoid duplicating comments or questions asked.
- Avoid language that could be offensive. All profanity is strictly prohibited. Remember that using all caps when replying online signifies shouting. This would be rude and combative.
- Be sensitive to the fact that there will be fellow students from all parts of the world with many differing backgrounds and languages. Remember that slang and idioms will most likely be misconceived and/or misinterpreted. These should be avoided.
- Respect others views or opinions.
- Be thoughtful of the privacy of others. Ask permission before sharing email addresses or other personal information.
- Do not forward inappropriate material such as: virus warnings, chain letters, jokes, etc. The sharing of pornographic material is strictly prohibited.
- Use good spelling and grammar. Avoid using texting shortcuts.
- Strive to compose your comments in a positive, supportive and constructive manner at all times.

    Any of these offenses will be dealt with by the school disciplinary committee.

ADA ACCOMMODATIONS

All reasonable accommodations will be provided for students with disabilities. Any student attending USILACS who needs an accommodation due to a chronic challenge (i.e. blindness, deaf or hard of hearing, mobility issues, psychological, or learning disability), register with:

> USILACS Registrar's Office
> 1221 Brickell Ave.
> Miami, FL 33131
> 1-305-330-2202
> registrarsoffice@usilacs.org

ACADEMIC DISHONESTY/CHEATING

We encourage collaborating with others, either in person or online, to study and learn. When you complete your assignments or your exams, however, the wording has to be your own.

Plagiarism is the theft of someone else's work and ideas. You are permitted to cite or even quote someone else, however, you must properly cite them. There are two accepted ways of doing this. They are known as Modern Language Association (MLA) or American Psychological Association (APA). You can visit www.citationmachine.net for help in correctly citing information.

As a school that strives to maintain high moral standards, we strongly caution our students to be ethical and honest. Endeavor to be honest in conducting yourself in regard to any coursework you accomplish or exams you may take. Cheating is a dishonest practice.

REFERENCE MATERIALS

The vast majority of textbooks are outdated by the time they are published. USILACS education programs are not based upon outdated printed textbooks. USILACS programs are based on the most accurate and reliable knowledge available; specifically, up-to-date vetted internet-based information.

For those who would like some reference or Internet search recommendations, we would recommend the following.

> (2016) 3rd Edition of Learn Python the Hard Way: Zed A. Shaw
> (2014) The Missing Link: An Introduction to Web Development and Programming. Mendez, Michael. OpenSUNY
> (2018) How Computers Work (A series of 6 videos of which 4 will be viewed) By   Code.org.
> (2017) The World Wide Web: Crash Course Computer Science #30. Anne Philbin.
> (2017) How to Select Your First Programing Language. Craig Dennis.
> (2006) Computer Science Algorithms: KHAN ACADEMY.

MINIMUM REQUIRED SUPPLIES

All students will need all of the following:
- Computer with camera, microphone, and speakers.
- Skype installed on the computer with an active Skype account.
- Internet
- Printer
- Notebook paper
- Pens/pencils

If the student does not have a computer or internet, there will be some available for use at the school in the computer lab.

GRADING SYSTEM

There will be three tests throughout the course. Each test will count for 33.3% of the final grade.

Grade	Percentage	Grade Point
A+	99	4.0
A	97	3.8
A-	94	3.7
B+	89	3.3
B	85	3.0
B-	81	2.7
C+	77	2.3
C	73	2.0
C-	69	1.7
D	66	1.0
F	59	0.0

All students must earn at least a "D" in order to pass the class.

ASSIGNMENTS

Paper on Artificial Intelligence in Society-
This paper should cover a form of artificial intelligence used by many people today. You should explain how it is used, what purpose it accomplishes, how it makes the users life easier, and what tasks it performs. This should be a minimum of 500 words.

Design a Web Page-
The student can develop the website on PowerPoint or can go to www.wix.com. You can create a website for an imaginary business. You only need to design the first or front page of the site.

Write a simple program-
Try to write a program to play a simple game. It could be a game of tic-tac-toe or a game where one person takes one or two chips from a stack of random amount of chips. The next person does the same. The player to take the last chip wins.

WEEKLY ASSIGNMENTS

Week 1	Overview of course and coursework A Good First Program (1) Comments and Pound Characters (2)
Week 2	Numbers and Math (3) Variables and Names (4) More Variables and Printing (5)
Week 3	Strings and Texts (6) More Printing (7) Printing, Printing (8) Printing, Printing, Printing (9)
Week 4	What Was That? (10) Asking Questions (11) Prompting People (12) *Artificial Intelligence in Society paper due*
Week 5	Video review and Exam
Week 6	Parameters, Unpacking, Variables (13) Prompting and Passing (14) Reading Files (15) Reading and Writing Files (16)
Week 7	More Files (17) Names, Variables, Code, Functions (18) Functions and Variables (19) Functions and Files (20)
Week 8	Functions Can Return Something (21) What Do You Know So Far? (22) Read Some Code (23) *Design a web page due*
Week 9	Video review and Exam
Week 10	You Make a Game (45) More Practice (24) Even More Practice (25)
Week 11	Loops and Lists (32) Accessing Elements of Lists (34) Designing and Debugging (36) Symbol Review (37)
Week 12	Doing Things to Lists (38) Dictionaries, Oh Dictionaries (39) Modules, Classes, and Objects (40) *Write a simple program for a game due*
Week 13	Video review and Final exam