Spring 2019 (Last Updated: 12/29/2018)

Professor: Sheikh "Sam" Shamsuddin, Ph.D.
Email: shamsuddin@iit.edu
Office Hours: By appointment, email, or text message
Cell phone text message: (312) 600-7493
Classroom: SB-111 and Online
Monday 5:00PM – 7:40PM
Class Start Date: 1/14/2019 – 5/4/2019

Required Textbook:

Starting Out with Python, 4th Edition, 2018, by Pearson
ISBN-10: 0134444329
ISBN-13: 9780134444321

Course Catalog Description: Contemporary open-source programming languages and frameworks are presented. The student considers design and development topics in system, graphical user interface, network, and web programming. Dynamic scripting languages are covered using object-oriented, concurrent, and functional programming paradigms. Concepts gained throughout the course are reinforced with numerous exercises which will culminate in an open-source programming project. Credit: 3. Prerequisite: ITMD 411

Course Objectives

1. Learn how to write computer programming using Python language.
2. Learn the Python language, its structure, syntax concepts, libraries and application.
3. Learn Input/output, functions, data types, control structures, and lists/arrays.
4. Demonstrate Object Oriented Programming using Python.
5. Demonstrate implementation of Graphical User Interface (GUI).
6. Test, design and solve problems using Python Programming Language

Course Outcomes

Upon completion of this course, the student should be able to do the following:

1. Gain experience skills to write, compile, execute, troubleshoot, and resolve problems using Python Programming Language and its features.
2. Acquire the ability to develop, understand and implement the concept of Object Oriented Programming methodology in program development.
3. Acquire the ability to develop and identify important Python ample libraries.
4. Gain the ability to locate and use of Help Resources.
5. Enhance confidence in developing and writing Object Oriented Programs.
6. Develop the ability to analyze and evaluate software application and development theory and concepts**.**

Readings/Videos: Readings for the class will be assigned from the textbook as well as in the form of online reading. Online resources and videos will be linked from or embedded in a Blackboard page. It is essential that you do all readings, view the videos, and complete all labs and assignments. These materials are a necessary and integral part of the class and will form the basis for any class discussions on the topic. Specific readings are assigned by topic above.

Course Notes: Copies of the course lecture notes in the form of PowerPoint presentation, websites, additional references accompanying each lecture will be provided on Blackboard. You should be aware that note taking is encouraged and should help them understanding of the material.

Blackboard: The course will make intensive use of Blackboard (http://blackboard.iit.edu/) for communications, assignment submissions, group project coordination, providing online resources and administering examinations. All remote students will view the course lectures online via Blackboard, and online readings and other class resources may be found on Blackboard.

Attendance: Students are expected to be responsible to view all lectures provided online. Students may contact the instructor if further assistance is needed.

Assignments, Exams: This course involves a great deal of hands-on activities and programming assignments. All Assessments and Assignments must be completed on or before the due dates. Late work will not be accepted. The instructor will not accept bulk Assessments or Assignments. Make-up exams are not encouraged except on emergencies situation. It is extremely critical that students complete all tasks on time. Past experience has shown that students who were behind on their assignments never caught up. Submitting assignments in the order assigned will ensure progression according to academic design of the course. Collaboration and teamwork are encouraged; however, students must submit and do their own work. Failure to submit on or before the due dates that will be available on class blackboard will result in zero point. All tasks mentioned above will be assigned via class blackboard.

For Graduate Students: Some assignments for graduate students may or may not be the same as the undergraduate students. Graduate students' assignments will be slightly challenges.

Note: The instructor will not provide topics for research papers. Topic selection is an important part of the research process. There is variety of topics in this field and with a little work on your part arriving at a topic should not be difficult at all. Topics should be very specific as you will be covering it in a relatively short amount of writing and you want to reflect an in-depth coverage of your topic, which you cannot do with a very broad topic. *(It's really up to you about topics)*

Academic Honesty:
All work you submit in this course must be your own. You must fully attribute all material directly quoted in papers and you must document all sources used in the preparation of the paper using complete, APA-style bibliographic entries. Including directly quoted material in an assignment without attribution is always plagiarism and will always be treated as such by the instructor. No more than thirty-three percent of material included in any paper may be direct quotes. If you submit plagiarized material you WILL receive a grade of ZERO for the assignment, an Academic Honesty Violation Report will be filed, and it may result in your expulsion from the course with a failing grade as per the IIT and ITM academic honesty policies. There is no excuse for not understanding this policy and if you do not understand it please consult with your instructor to discuss the matter

until you do.

E-mail: Every attempt will be made to answer e-mail on a daily basis. When sending e-mail please indicate clearly the problem or concern you are having, your name and course enrolled.

Grading: Material to be evaluated will be based on all of your Assignments, Assessments, Hands-on Labs and Activities. Grades will be based on accumulations of all points scored.
Grading criteria for graduate students will be as follows:

A - *Outstanding work reflecting substantial effort* 90% and up
B - *Adequate work fully meeting that expected of a graduate student* 80% to <90%
C - *Weak but marginally satisfactory work not fully meeting expectations* 70% to <80%
E - *Unsatisfactory work* less than 70%

Withdrawal policy: No longer attending a class does not constitute an automatic withdrawal. Students are responsible to withdraw from the course if they have decided not to pursue with the course anymore. Please check the university's calendar for the last date to withdraw the course.

Disabilities: Reasonable accommodations will be made for students with documented disabilities. In order to receive accommodations, students must obtain a letter of accommodation from the Center for Disability Resources and make an appointment to speak with me as soon as possible. My office hours are listed on the first page of the syllabus. The Center for Disability Resources (CDR) is located in 3424 S. State St., room 1C3-2 (on the first floor), telephone 312.567.5744 or disabilities@iit.edu.

Class Tentative Schedule

Week	Topics	Chapters
1 - 01/14/19	Class and course introduction. Downloading using and Python. Learning simple Python programs, I/O, and expression. Assignment & Assessment 1.	Chapters 1, 2, Appendix A
2 – 01/21/19	------- No Class - Martin Luther King Day -------	No class
3 – 01/28/19	Decision Structures. Assignment & Assessment 2	Chapter 2 & 3
4 – 02/04/19	Repetition Structures. Assignment & Assessment 3	Chapter 4
5 – 02/11/19	Functions. Assignment & Assessment 4	Chapter 5
6 – 02/18/19	Files and Exceptions. Assignment & Assessment 5	Chapters 6
7 – 02/25/19	Lists and Tuples. Assignment & Assessment 6	Chapters 7
8 – 03/04/19	More About strings. Assignment & Assessment 7	Chapter 8
9 – 03/11/19	Mid-term	Chapters 1,2,3,4,5,7,8
10 – 03/18/19	------- No Class. Spring Break -------	No Class
11 – 03/25/19	Dictionaries and Sets. Assignment & Assessment 8	Chapter 9
12 – 04/01/19	Classes and Object-Oriented Programming. Assignments and Assessment 9	Chapters 10
13 – 04/08/19	Object Oriented Programming. Assignment & Assessment 10	Chapter 10
14 – 04/15/19	Inheritance. Assignment & Assessment 11	Chapter 11
15 – 04/22/19	Recursions. Assignment and Assessment 12	Chapter 12
16 – 04/29/19	Graphical User Interface (GUI). Assignment & Assessment 13	Chapter 13
17 - 05/04/19	Final Exam Project Distribution	Comprehensive

Expectations and Assignment Submission Rules

1. All assignments, (including assessments, projects, labs, and any related course work) must be submitted on or before the given due dates. Late assignments are not acceptable.
2. When an assignment due date has passed, it will disappear from the class Blackboard (Bb). Please do not ask the instructor to reset the assignment due date or inform the instructor that you can no longer see the assignment on the Bb.
3. Late assignments are not acceptable unless on medical (with a doctor's letter) or emergency situation (with proof).
4. To receive full points, a complete assignment must be submitted by following the assignment's requirements and specifications.
5. Unless specified, all assignments must be submitted on the class Bb. All programs source code listings must be presented with the program output/result.
6. Unless requested by the instructor, no assignments should be sent to the instructor's email address. Any assignments sent to the instructor's email without permission will be disregarded.
7. Submitting assignments in the order assigned will ensure progression according to the academic design of the course.
8. Discussions and collaborations are permitted. However, students must do their assignments. Dishonest work will be disciplined according to the university's policy.
9. If you are caught copying someone's work, you will be placed in one of the following possibilities (depending on the work):
    a. You get a zero for your current assignment.
    b. You will get one letter grade less in the course; i.e. if you get an A, you will get a B grade.
    c. You will be expelled from the university.
10. If you are caught copying above, all of your previous work relating to the course will be re-examined and re-evaluated. All of your future work in the course will be closely scrutinized.
11. I am aware of grading distribution for this course as stated in the syllabus.
12. The grading distribution will not be curved.
13. A student's attitude and behavior relating to the course will be considered when a borderline grade befalls to boost up the grade to the next higher letter grade.
14. An incomplete grade is not allowed.
15. Students are responsible for withdrawing from the course if no longer attend the class. Please check the university's academic calendar on the last day allowed to withdraw from the class.
16. Bad planning on a student's part is not an emergency on the instructor's part.