**ANLY 560, Functional Programming Methods for Analytics (3 Credits)**

**Summer 2021**

**Name and Contact Information**

**Instructor:** Zi(Bennie) Yang

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**Office Hours:** By appointment

**Executive Sessions:** Saturdays,08h00 – 12h00(5/15, 6/19, 8/7)

**Online:** Tuesdays 20h30 – 22h00 (Eastern Time)

**Course Description and Learning Objectives**

**Course description**

This course provides the student with the required knowledge and skills to handle and analyze data using a variety of programming languages as well as a variety of programming tools and methods. Depending on current industry standards, the student will be provided with the opportunity to develop knowledge and skills in programming environments such as SQL, Python and JAVA. In addition, the student is introduced to current industry standard data analysis packages and tools such as those in Python.

**Course learning outcomes**

By the end of this course, students should be able to:

* Describe a programming language within a context of a set of programming paradigms
* Apply the programming control structures (sequence, selection, and iteration) to solve a computing problem
* Programmatically manipulate data using a high-level programming language

**Textbooks (Required)**

This course is a “lab” course that will be taught through the use of course notes and a variety of articles.

**Grading**

* Exams 30%
* Labs 50%
* Participation 20% (attendance, participation, homework assignments)
* 2 homework Assignments, 3 Labs and 2 Exams.

**More on Grades**

The graduate school valid grades are A, B, C, and F. Please note that any grade below a C is an F.

Grade scale

|  |  |
| --- | --- |
| Letter | Value range |
| A | 100 >= x >= 90 |
| B | 90 > x >= 80 |
| C | 80 > x >= 70 |
| F | 70 > x |

**Course Conduct**

A few rules will help us to get the most of our investment in **ANLY 560**:

* You should plan to dedicate ***10 hours a week*** for this course.
* Canvas is going to be our platform for almost all course activities.
* In addition, we will have at least one **synchronous session** on weekly basis.
* **Attending synchronous sessions** and actively participating in the discussions is highly recommended as it is where the basic concept(s) of each unit are explained, assignments are discussed and your questions answered.
* I anticipate that you will need 3 to 4 hours, to budget for **solving homework assignments and labs**.
* **You are responsible for all the readings**, even if the material is not explicitly covered in class. You should read the class materials prior to class (or synchronous session) and be prepared to discuss and ask questions about the readings and assignments.
* If you are not present in class, it is your responsibility to obtain the class notes and material from another classmate. ***It is not the professor’s responsibility to get you caught up and do not ask the professor to do so.*** Content that is covered in class will be the basis for homework assignments and tests. It has been the professor’s experience that students who attend class on-time and stay for the entire class do well in the class. Students who are late to class and/or do not attend class do not do well in the class.
* All work must be completed and turned-in on or before the due date. ***No late work will be accepted whether it is laboratories, exams, or homework assignments****.* Late means after the due date posted on Canvas. Note that a computer's failure is not an excuse (it represents poor planning on your part).
* Your work should be properly referenced and adhere to standards of both academic integrity and proper form. Generally, I prefer the APA style (see http://www.apa.org/).
* All class credit-related electronic mail must be done using Harrisburg's electronic mail service and the student's assigned Harrisburg University ID. By 'credit-related' I mean all work to be evaluated for credit. Any work submitted through a different mail system will **NOT** be accepted.
* All activities will be assigned individually unless mentioned in the assignment.
* Students who participate in University-sanctioned events (such as athletics) must make prior arrangements and give the instructor ample notice. Missing class (or a synchronous session) for practice is not advised.

**Statement on Academic Integrity**

According to the University's Student Handbook: Academic integrity is the pursuit of scholarly activity free from fraud and deception, and is the educational objective of this institution. Academic dishonesty includes, but is not limited to cheating, plagiarism, fabrication of information or citations, facilitating acts of academic dishonesty by others, unauthorized possession of examinations, submitting work of another person, or work previously used without informing the instructor, or tampering with the academic work of other students. Any violation of academic integrity will be thoroughly investigated, and where warranted, punitive action will be taken. Students should be aware that standards for documentation and intellectual contribution may depend on the course content and method of teaching, and should consult the instructor for guidance in this area.

***Honor Code -*** We as members of Harrisburg University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work. As a Community of Learners, we honor and uphold the ***HU Honor Code***.