Course Syllabus

**Fall 2021**

**Mahdi Almohri**

**ISOM 230: Business Problem Solving & Programming**

**Instructor:** Dr. Mahdi Almohri

**Times:** Sun – Tue – Thurs

Section 1: 10:00 am-10:50 am

Section 2: 11:00 am - 11:50 am

**Location:** Room 1079

**Contact Information:**

**Email:** mahdi.almohri@ku.edu.kw   Room: A2 1009

**Office Hours**: Sun, Tue, Thu     12:00 PM – 12:50 PM or by email appointment

**Teaching Assistant:**

**Name :** Ms. Waad Akra

**Location :** ISOM Department – 2nd Floor

**Email :** <waad.akra@ku.edu.kw>

**Tutorials :** TBA

**Office Hours :** TBA

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## Course Description

The purpose of this course is to introduce students to fundamental concepts and models of application development and help them understand the key processes related to building functioning applications and appreciate the complexity of application development. Students will also learn the basic concepts of program design, data structures, programming, problem solving, programming logic, and fundamental design techniques for simple business applications. Moreover, students will comprehend and practice the program development life cycle, including gathering requirements, designing a solution, implementing a solution in a programming language, and testing the completed application.

## Course Learning Outcomes

Upon successful completion of the course, students will be able to:

1. Use primitive data types and data structures offered by the development environment
2. Analyze problems and choose an appropriate data structure for modeling a simple problem [LG2, LG5].
3. Write simple applications that relate to a specific business domain [LG3].
4. Design, implement, test, and debug a program that uses each of the following fundamental programming constructs: basic computation, simple I/O, standard conditional and iterative structures, and the definition of functions [LG2, LG5].
5. Use appropriate tools to deliver and evaluate basic technical documents, presentations, and group interactions [LG4].

## Textbook

* Tony Gaddis (2019), Starting out with Python, 4th edition. [Purchase online](https://collegestudenttextbook.org/product/starting-out-with-python-global-4th-edition-ebook/).
  + OR: Purchase [paper back](https://www.amazon.co.uk/Starting-Python-Global-Tony-Gaddis/dp/1292225750/ref=sr_1_1?crid=1RJKSCZT80E03&dchild=1&keywords=gaddis+python&qid=1602392965&sprefix=Gaddis%2Caps%2C249&sr=8-1).

## Prerequisite

* ISOM 130

## Lab Requirements

* 1 Hour (No credit)

## Recommended Readings

* Allen B. Downey (2015), Think Python, 2nd Edition.  
  <https://greenteapress.com/wp/think-python-2e/>
* Al Sweigart (2020) Automate the Boring Stuff with Python, 2nd Edition.  
  <https://automatetheboringstuff.com>

## Additional material

This class is supported by [DataCamp](https://www.datacamp.com/), the most intuitive learning platform for data science and analytics. Learn any time, anywhere and become an expert in R, Python, SQL, and more. DataCamp’s learn-by-doing methodology combines short expert videos and hands-on-the-keyboard exercises to help learners retain knowledge. DataCamp offers 325+ courses by expert instructors on topics such as importing data, data visualization, and machine learning. They’re constantly expanding their curriculum to keep up with the latest technology trends and to provide the best learning experience for all skill levels. Join over 5 million learners around the world and close your skills gap.

## Course Content Delivery Strategy

* Use of PowerPoint presentations
* Online content delivery through Teams
* Assignments and exercises through datacamp.com and repl.it

**Tentative Course Outline:**

|  |  |
| --- | --- |
| **Week** | **Topics** |
| 1 | Introduction to programming |
| 2 | Hello world |
| 3 | Input, Process, Output |
| 4,5 | Decision structures and Boolean logic |
| 6 | Repetition structures |
| 7 | Functions |
| 8,9 | Files |
| 10,11 | Lists |
| 12 | Strings |
| 13,14 | Dictionaries and Sets |

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## Course Requirements and Policies

* The student is responsible for understanding class policies and keeping up to date with any changes made to them.
* Slack will be the main class communication tool, the student will be responsible to learn how to use it and to keep up to date with class announcements.
* Announcements, policy changes, assignments, and all communication posted on slack will be considered authoritative and treated as if the instructor mentioned it in class and as part of the course syllabus.
* To prevent class disruption, no entry is allowed after class attendance has been taken.
* Quizzes/exams will not be repeated for any reason.
* Negotiation of the final grade is neither accepted nor discussed.
* All mobile phones, communication, and electronic devices should be silenced.
* Food and drinks are allowed in class as long as they do not cause any disruption to class.
* Students are held to the highest standards of honor and conduct in class. As such, plagiarism and cheating will not be tolerated and will result in an automatic F for any student caught in such an act.
* Written assignments will not be accepted if not typed.
* Late assignments/submissions will not be accepted.

**Class project:** TBA

**Participation:** Attendance and participation in class discussions is expected from students, and will also be part of their assessment.

**Attendance and Participation:** Every student in this course must abide by the Kuwait University Policy on Attendance (published in the Student Guide, Chapter 3, Section 13). A copy of the student guide can be accessed online on:

http://www.kuniv.edu/cs/groups/ku/documents/ku\_content/kuw055940.pdf

**Cheating and Plagiarism:** Every student in this course must abide by the Kuwait University Policy on Cheating and Plagiarism (published in the Student Guide, Chapter 3, Section 2). A copy of the student guide can be accessed online on:

http://www.kuniv.edu/cs/groups/ku/documents/ku\_content/kuw055940.pdf

Please carefully note all sources and assistance when you turn in your work. Under no circumstances should you take credit for work that is not yours. You should neither receive nor give any unauthorized assistance on any deliverable. If you have any questions about what constitutes “unauthorized assistance” please email me before the deliverable is submitted.

**Writing Style:** Students must refer to APA writing style for their assignments and report writing. Refer to the English Language Center for help.

For sample and reference, please visit: <https://owl.english.purdue.edu/owl/section/2/10/>

## Grading

The scores in this course will be the weighted average of the following items:

|  |  |
| --- | --- |
| **Weight** | **Description** |
| 10% | Lab + Assignments |
| 20% | Quizzes (best 4 out of 5) |
| 20% | Midterm (Written + practical/project) |
| 15% | Group Project |
| 35% | Final (Written + Project) |
| 100% | TOTAL |

## Grade Distribution

|  |  |
| --- | --- |
| **Grade** | **Range** |
| A | ≥ 95 |
| A- | ≥ 90 and < 95 |
| B+ | ≥ 87 and < 90 |
| B | ≥ 83 and < 87 |
| B- | ≥ 80 and < 83 |
| C+ | ≥ 77 and < 80 |
| C | ≥ 73 and < 77 |
| C- | ≥ 70 and < 73 |
| D+ | ≥ 65 and < 70 |
| D | ≥ 60 and < 65 |
| F | < 60 |