

King Fahd University of Petroleum & Minerals

College of applied and supporting studies

Prep Science and Engineering

**PYP-002: Preparatory Computer Science (0-2-1)**

Syllabus – First Semester 2018-2019 (181)

**Instructor Information**

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| Teacher NameEmail | **Ahmed Bagais** |
| **bagais@kfupm.edu.sa** |
| Room # | **57-428** |
| Office Hour Teacher | **Mon + Tue: 12:00 – 1:00 pm****Wed: 2:10 – 3:00 pm****Thurs: 8:00 – 10:00 am,**  **2:10 – 3:00 pm** |
| Course Coordinator | **Putu Danu Raharja**Room# 57-426Email--- raharja@kfupm.edu.sa |

**Course Catalog Description:**

Introduction to computing systems; Using online learning management systems; Word processing; Numerical data analysis using spreadsheets; Preparing presentations; Introduction to computer networks; Computing ethics; Computational problem solving by developing algorithms and visual programs.

**Pre-requisites:** None

**Course Objectives:**

Course objectives are

1. **Introduce** basic principles, terms and concepts of computational tools related to the use and functionality of computer systems
2. **Provide experience** in applying basic techniques and tools for computer applications and solving computational problems
3. **Engage** in the computational thinking involved in using computers.

**Course Learning Outcomes:**

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

1. Identify basic elements and recognize the key concepts about computer systems, particularly about hardware and software
2. Identify basic elements and recognize the key concepts related to computer networks, Internet and network security
3. Recognize the important concepts related to safety, security and privacy in using computers
4. Use computer applications for document development, quantitative and textual data processing and analysis, and making slide-based presentations
5. Approach a problem using computational thinking concepts such as iteration, symbolic representation, and logical operations
6. Reformulate a simple computational problem into algorithms and flowcharts
7. Write a program as a simple algorithmic solution using a graphical programming language.

**Required Material:**

* Practical Computer Literacy, Internet and Core Computing Certification, Fourth Edition, Parsons and Oja, Course Technology/CENGAGE Learning, ISBN 10-1-111-53334-2.

**Tentative Schedule:**

| **Week** | **Lab Topic** | **Chapters in Textbook** |
| --- | --- | --- |
| **1** | Computer Systems, Components and their Functions, Software. | Chapter 1, 2, 3, 4 |
| **2** | Windows Operating System: Microsoft Windows 10, Files management and Blackboard training. | Chapter 5, 6 and 7, |
| **3** | Word Processing: Microsoft-Word**Quiz-1** | Chapter 8, 9 |
| **4** | Word Processing: Microsoft-Word | Chapter 9,10 |
| **5** | Word Processing: Microsoft-Word | Chapter 11 |
| **6** | Presentation: Microsoft-PowerPoint | Chapter 15, 16 |
| **7** | Spreadsheet: Microsoft-Excel **Homework-1****Major-1 Exam** (Word, PowerPoint) | Chapter 12, 13, 14 |
| **8** | Numeric Application using Spreadsheet: Microsoft-Excel | Chapter 12, 13, 14 |
| **9** | Numeric Application using Spreadsheet: Microsoft-Excel | Chapter 12, 13, 14 |
| **10** | Introduction to Computer Networks and Ethics**Homework-2****Major-2 (Excel)** | Chapter 19, 22 |
| **11** | Computational thinking concept using graphical programming language Snap: Algorithms, Flowchart, and variables | Handout |
| **12** | Computational thinking concept using graphical programming language Snap: sequence, and conditionals**Quiz-2** | Handout |
| **13** | Computational thinking concept using graphical programming language: iteration | Handout |
| **14** | Computational thinking concept using graphical programming language: Drawing and motion.**Quiz-3****Homework-3** | Handout |
| **15** | Computational thinking concept using graphical programming language Snap.**Quiz-4****Major-3 (Snap!)** |  Handout |

**Assessment Plan:**

|  |  |
| --- | --- |
| **Lab work evaluation** | **5 %** |
| **4 Quizzes** (Multiple choice by Black Board) | **20 %** |
| **3 Home works (**Multiple choice Blackboard-based) | **15 %** |
| **3 Major Exams:*** **Major 1 = 25%**
* **Major 2 = 15%**
* **Major 3 = 20%**
 | **60 %** |
| **Total** | **100%** |

**Passing Marks for this Course is 60**

Missing two unexcused labs will result in a **DN grade without prior warning**.

**Course Policies** :

* ***Course Website & Participation***: Students are required to periodically check the blackboard and download course material as needed. All resources will be posted through the blackboard as well.
* ***Attendance and DN policy***:
	+ Regular attendance is a university requirement; hence attendance will be checked at the beginning of each lab.
	+ Late arrivals will disrupt the class session. A student will be marked **late** if he arrives within the first 10 minutes of the lab. A total of 5 late attendances is equivalent to one unexcused absence.
	+ A student will be marked **absent** if he is more than 10 minutes late, but can be allowed to attend the class.
	+ Missing two or more unexcused labs will result in a **DN grade without prior warning**.
	+ Also, a student shall get **DN grade** if the **total** of unexcused and excused absences is three or more.
	+ To avoid being considered as absent, an official excuse signed by the Assistant Dean of PYP must be shown no later than one week of returning to classes.
* ***Make-up exam policy:***
	+ ***No makeup of homework will be given.***
	+ A makeup exam/quiz shall be arranged by the instructor for students who have missed an exam/quiz and showed up with a valid official excuse.
* ***Re-grading policy***: If you have a complaint about any of your grades, discuss it with the instructor no later than a week of distributing the grades (except for the final). Only legitimate concerns on grading should be discussed.
* ***Office Hours***: Students are encouraged to use the office hours to clarify any part of the material that is not clear. However, the instructor will only provide hints if it is an assigned task but not solve it.
* ***Dress Code***: Students wearing shorts, or sleeveless shirts, or sandal/slipper are not allowed to attend the lab.
* ***Academic honesty***: Students are expected to abide by all the university regulations on academic honesty. Cheating will be reported to the Department Chairman and will be severely penalized. Although collaboration and sharing knowledge is highly encouraged, copying others’ work without proper citation, either in part or full, is considered plagiarism. Whenever in doubt, review the university guidelines or consult the instructor.
* **Cheating in whatever form will result in F grade.**
* ***Courtesy***: Students are expected to be courteous toward the instructor and their classmates throughout the duration of this course. Talking while someone else is speaking will not be tolerated. Furthermore, all cell phones must be turned off during class and exams.  In addition, students are expected to be in class on time. More importantly, you are not allowed to leave the class unless it is an urgent matter. To contact your instructor, please use email through KFUPM EMAIL. When necessary to send an email through the university email system, please indicate PYP002-181 in the "Subject" field of your email, e.g. “PYP002-181: Question about Homework 1”.