Programming With Python (PWP)

AAPP010-4-2 19th Oct, 2020

Module Briefing

<u>Lecturer information</u>

Lecturer Name: Tanveer Khaleel Shaikh

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Default Venue for meetings: FCET staff-room
at level 5

<u>Pre-requisites for this module</u>

- None

Aims of this module

- Developing problem solving skills using flow chart and pseudo code.

- Enable students to feel confident of their ability to solve simple computing problem and implement the solution as a program in a specific programming language.

<u>Course Learning outcomes, CLOs</u>

- **At the end of this course, YOU should be able to:**

1. Translate simple problem statements into programmable solutions using flow chart/pseudo code (C3,PLO2)

2. Comprehend knowledge of basic and advanced programming concepts (C2,PLO1)

3. Show the ability to write computer programs for a given problem statement (P4,PLO3)

Mapping of CLOs with MOEs Domain

Course Learning Outcomes (CLO)	Programme Learning Outcomes (PLO)											
	Knowledge and Understanding, Cognitive	Cognitive Skills,	Practical Skills,	Interpersonal Skill,	Communication skill,	Digital Skills,	Numeracy Skills,	Leadership, autonomy and responsibility	Personal Skills,	Entrepreneurial Skills,	Ethics and professionalism	
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PLO12
CLO 1		✓										
CLO 2	✓											
CLO 3			✓									

PLO1 – Knowledge and Understanding
PLO2 – Cognitive
PLO3 – Practical Skills

MQF and MOE Domains
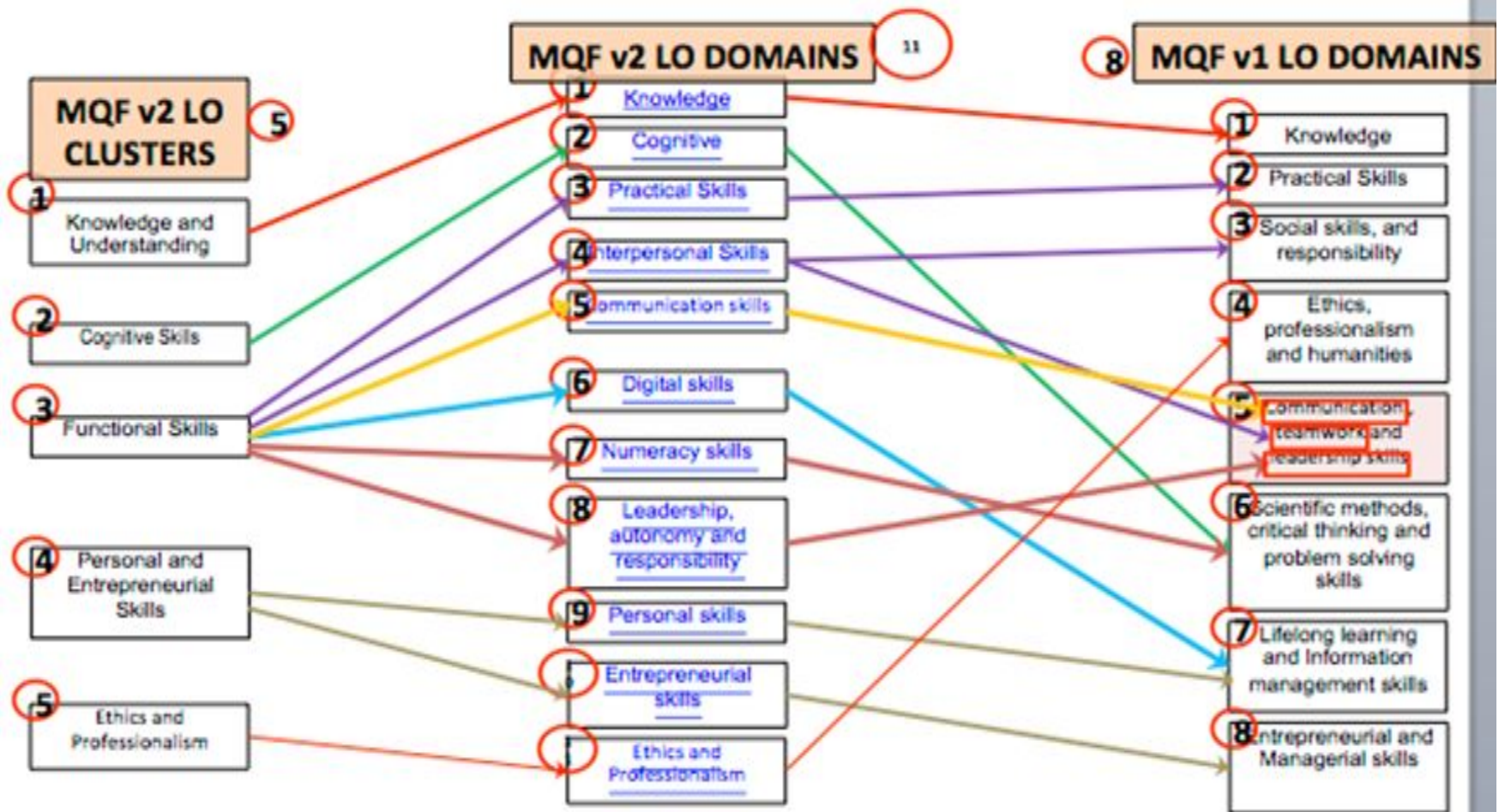
Teaching Strategies

- Lecture
- Tutorial/Lab

Assessment Methods

- Group Assignment **(50%)** : CLO1 & CLO3

- Written Exam **(50%)** : CLO2

**refer to SAIS for details

Student Learning Time (SLT)

- **Course Credit Value: 3**

- **Total Learning Hours:**
  - Lecture: 28 hours per semester
  - Tutorial / Lab : 28 hours per semester
  - Independent Learning Time: 84 hours

Methods of Delivery

Hence,

- We are now moving from the traditional topic based teaching to outcome-based education

Outcomes Based Education (OBE)

- OBE is education based on producing particular educational outcomes that:

  □ Focus on what students can actually do after they are taught

  □ Expect all learners / students to successfully achieve particular (sometimes minimum) level of knowledge and abilities.

So…What is OBE?

It's
<u>NOT</u>
What we want to teach,

It's
<u>What You should learn</u>

Course Content Outline

CLO1 & CLO3 : Group Assignment (50%)

Lecture/Tutorial

- Introduction to problem solving

- Analysis of Problem statement

- Design using flow chart and pseudo code

- Solving simple problems using pseudo code and flow chart

- Introduction to a programming language

- Control Structures & Looping Structure in a programming language

- Aggregate data types (List)

- Modular Programming (Functions)

- File I/O

Course Content Outline

CLO2 : Written Exam (50%)

Lecture

- Introduction to a programming language
- Control Structures in a programming language
- Looping Structure in Programming Language
- Aggregate data types (List)
- Modular Programming (Functions)
- File I/O

<u>What is expected of you</u>

- **You should abide to all the rules & regulation of APU**
  - **Proper attire**
  - **No speaking of dialects**
  - **Attendance is compulsory and valid medical certificates or letters from parents /guardians must support any absence from class.**
  - **Three lateness will be equal to one absence**
  - **All pagers and handphones should be turned off during lectures.**

What support is available for you

- **Consultation hours**

- **Resources**

  ☐ **Reference material**

  Essential Reading
  - Gaddis, T. (2016). Starting Out with Programming Logic and Design. 4th Ed. Edinburg:United Kingdom, Pearson Education, Inc., ISBN-13 978-0133985078.
  - Gaddis, T. (2018). Starting Out with Python. 4th Ed. Edinburg:United Kingdom, Pearson Education, Inc., ISBN-13 978-0134444321.
  - Guttag, J. V. (2016). Introduction to Computation and Programming Using Python. 2nd Ed. Cambridge MA, United States:MIT Press, ISBN 978-0262529624.
  - Downey, A. B. (2015). Think Python: How to Think Like a Computer Scientist. 2nd Ed. California, United States:O'Reilly Media, Inc, ISBN 978-1491939369

  ☐ **Internet resources**

  ☐ **Software :** Python IDLE (Open Source)

Achievement requirements

Undergraduate:

Marks	Alphabetical Grade	Grading Point	Classification
80-100	A+	4.0	Distinction
75-79	A	3.7	
70-74	B+	3.3	Credit
65-69	B	3.0	
60-64	C+	2.7	Pass
55-59	C	2.3	
50-54	C-	2.0	
40-49	D	1.7	Fail (marginal)
30-39	F+	1.3	Fail
20-29	F	1.0	Fail
0-19	F-	0	Fail

Question and answer session

Q & A

<u>What we will cover next</u>

- Introduction to Algorithm