Course Specification
(Bachelor)

Course Title:	Analysis Solution Evaluation
Course Code:	BIDA290
Program:	Business Intelligence and Data Analysis
Department:	Computer
College:	Applied College
Institution:	Najran University
Version:	1
Last Revision Date:	2/12/1446 AH

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: (3 hours)					
2. Course type					
A.	☐University	☐College	☐Department	☐Track	☐Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (Level 4)					
4. Course General Description:					

This course is designed for learners who are already familiar with the essentials of Python.
The course will cover the following:

- **modules, packages, and PIP;**
- **character encoding, strings, and string processing;**
- **generators, iterators, closures, files, file streams, and file processing;**
- **exception hierarchies, and exception classes and objects;**
- **general coding techniques and the fundamentals of Object-Oriented Programming (OOP).**

Note: This course prepares the student to take the PCAP – Certified Associate in Python Programming certification.

5. Pre-requirements for this course (if any)**:**

BIDA 140

6. Co-requisites for this course (if any)**:**

N/A

7. Course Main Objective(s):

- **Expands on the programming skills developed in BIDA140 Basic Scripting and Programming**
- **Prepares students to take the PCAP-Certified Associate in Python Programming certification.**

Students develop general coding techniques and the fundamentals of Object-Oriented Programming (OOP)

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	60	%100
2	E-learning		
3	Hybrid • Traditional classroom • E-learning		
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	30
2.	**Laboratory/Studio**	30
3.	**Field**	
4.	**Tutorial**	
5.	**Others (specify)**	
Total		60

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	**Summarize the core concepts of object-oriented programming (OOP)**	**K1**	Lectures, examples, class discussions	**Quizzes, midterm exam**
1.2				
…				
2.0	**Skills**			

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
2.1	Analyze a computing problem to apply OOP concepts	S1	• Problem-solving sessions, pair programming	• Quizzes •Midterm lab exams • Final Exam
2.2	Use packages, modules, PIP, file processing, and import statements	S2	• Hands-on labs, code examples	• Quizzes •Midterm exams
2.3	Implement exception handling mechanisms effectively	S3	• Live coding, error simulation activities	• Final Exam
3.0	**Values, autonomy, and responsibility**			
3.1	Function effectively as a member of a team	V1	Small groups	Group project grades, peer assessment
3.2				
...				

Function effectively as a member of a team

C. Course Content

No	List of Topics	Contact Hours
1.	Modules, packages, and PIP	8
2.	Character encoding, strings, and string processing	10
3.	Generators, iterators, closures, files, file streams, and file processing	10
4.	Exception hierarchies, and exception classes and objects	6
5.	Working with selected Standard Library modules (os, datetime, time, calendar)	8
6.	General coding techniques	8
7.	Fundamentals of Object-Oriented Programming (OOP): encapsulation, inheritance, abstraction, and polymorphism	10
Total		**60**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.			
2.			
3.			
...			

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	**Title:** ***Introduction to Programming Using Python*** **Publisher: Pearson** **Published year: 2013** **Author: Y. Daniel Liang** **ISBN 10: 0-13-274718-9**
Supportive References	• **"Python Crash Course" by Eric Matthes** ***A hands-on, project-based introduction to programming.*** • **"Automate the Boring Stuff with Python" by Al Sweigart** ***Great for beginners looking to apply Python to real-world tasks.***
Electronic Materials	• **Cisco Networking Academy: https://www.netacad.com/** • **https://www.python.org/** • ***The Python Essentials 2 course*** • ***Skills for ALL* (Cisco Academy)**
Other Learning Materials	

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	**- Classroom** **- IT Lab**
Technology equipment (projector, smart board, software)	**- Smartboard** **- Presentation Technology** **- Computer with MS Office** **- MySQL Workbench**

Items	Resources
Other equipment (depending on the nature of the specialty)	

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	**Exams Evaluation committee Students**	**Direct: Exam Review** **Indirect: Survey**
Effectiveness of Students assessment	-Faculty **- Quality and Development Unit** **- Curriculum Committee**	- Teachers' feedback - Students' feedback - Course report - Professional certification achievement rate
Quality of learning resources	**Students**	**Indirect: Survey** **Indirect: Survey**
The extent to which CLOs have been achieved	**Exams Evaluation Committee Students**	**Direct: Exam Review** **Indirect: Survey**
Other	**None**	**None**

Assessors (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	**EXECUTIVE COUNCIL**
REFERENCE NO.	**4600081176**
DATE	**22/12/1446 AH**