1.	**Course Code**	INFS3420		
2.	**Course Title**	Business Application Development I		
3.	**Credits**	3		
4.	**Pre-requisite Course(s)**	INFS3410		
5.	**Co-requisite Course(s)**			
6.	**Equivalent Course(s)**			
7.	**Incompatible Course(s)**			
8.	**Course Category**	☐ University Requirement		☐ University Elective
		☐ College Requirement		☐ College Elective
		☒ Department Requirement		☐ Department Elective
		☐ Specialization Requirement		☐ Specialization Elective
		☐ Other (specify):		
9.	**Course Owner**	College: COM		Department: INFS
10.	**Course Type**	☐ Lecture		☒ Lecture/Lab
		☐ Lecture/Seminar		☐ Lecture/Studio
		☐ Lecture/Tutorial		☐ Lecture/Lab/Tutorial or Seminar
		☐ Tutorial		☐ Laboratory (Practical)
		☐ Field or Work Placement		☐ Studio
		☐ Seminar		☐ Internship
		☐ Workshop		☐ Project
11.	**Language of Instruction**	English		

12. Course Description

The primary objective of this course is to apply purposeful programming to develop useful business applications. The first half the course will be providing the students a detail understanding and application of a programming language. During this time students will also be taught about the different concepts, IDEs, and tools related to the development environment. The programming language used in this course will be Python, which is one of the most demanding languages in today's computing environment. The last half of this course will be purely based on how to develop business application. Using a case study, student will be taught about the application of the language to program business application. The scope that application development scope to be explored and developed are conceptualizing and coding business requirements, GUI development, Data Analysis, and system architecture development.

13. Teaching/Learning Strategies

- Home work
- In-class/Lab Exercises
- Discussions and Reflections
- Case Study
- Group Project work

14. Assessment Components and Weight [%]

☐ Quizzes 20%	☐ Lab Assessments	☒ Other (specify): 5% (In-Class Challenges)
☐ Homework assignments 10%	☒ Project 30%	
☒ In-term examination(s) **Final Exam**: 35%	☐ Final examination	

15. Grading Method

☒ A-F Scale	☐ Pass/Not passed

16. Textbook(s) and Supplemental Material

— Fluent Python, 2nd Edition, by Luciano Ramalho, Released April 2022, Publisher(s): O'Reilly Media, Inc. ISBN: 9781492056355
— Head First Python, 2nd Edition, by Paul Barry, Released November 2016, Publisher(s): O'Reilly Media, Inc. ISBN: 9781491919538
— Official Python Documentation: https://docs.python.org/3.10/library/index.html
— W3C Schools – Python Guide : https://www.w3schools.com/python/

17. Matching Course Objectives with Program Outcomes and SQU Graduate Attributes

SQU Graduate Attributes

A. SQU graduates should be able to:	B. SQU graduates possess	C. SQU graduates should
1. apply the knowledge and skills relevant to the specialization 2. communicate effectively and use information and communication technologies 3. critically analyze complex information and present it in simple clear manner	1. interpersonal communication skills and alignment with culture of international labour market to assist them in practical life and in living successfully 2. skills and motivation for independent learning and engagement in lifelong learning and research 3. work ethics and positive values, and intellectual independence and autonomy 4. teamwork skills and display potential leadership qualities	relish good citizenship qualities, be conscious of their national identity and be socially responsible, engage in community affairs and be mindful of contemporary issues.

#	Intended Student Learning Outcome /Course Learning Objective	Relevant Program Outcome(s)	Applicable Attribute(s)
1.		PLO1. To provide students with an academically sound and integrated body of knowledge with a good balance between breadth and depth of theory and practice in Information Systems that aligned with local and international standards.	A1 and C
2.		PLO2. To equip students with technical and managerial knowledge in business processes analysis, design, development, analytical reasoning, and problem solving skills	A1, A3, B2 and C
3.		PLO3. To foster students interpersonal and communication skills;	A1, A2, B1, B2 and C
4.		PLO4. To equip students with skills needed for potential leaders who can present and defend their ideas, embrace team spirit, systematic, creative, ethical, and responsible in all their endeavors.	A2, B1 and B4
5.		PLO5. To provide students with technical educational foundation that facilitates continuous learning and sustains their technical strengths to surmount encountered challenges in managing information services in their professional careers.	A1, A3, B1, B2 and C

16. Student Responsibilities

It is the student's responsibility to know and comply with all University Academic Regulations relevant to participation in this course. These regulations specifically include attendance requirement and students` academic code of conduct.

For attendance, it is the student's responsibility to be punctual and to attend all classes.

Students are expected to perform their work with honesty and avoid any academic misconduct, which is defined as the use of any dishonest or deceitful means to gain some academic advantage or benefit. This can take many forms, including but not limited to, the following: copying, plagiarism, collusion and forging documents. For full details, please refer to the Undergraduate Academic Regulations and to the Student Academic Misconduct Policy.

Additionally, this course requires that you:

Not to use mobile phones during classes and not to bring mobile phones during exams.

COURSE INFORMATION			
Course Code	INFS3420	**Course Title**	Business Application Development I
Semester/ Year	SP2023	**Section(s)**	10/11
Day, Time, and Place	SUN & TUE 12.00 PM – 1.50 PM		
Course Coordinator	Dr. Waqas Aman		
Office Location	2016D	**Office Hours**	By Appointment
Office Tel. Ext.	2965	**Email**	waqas@squ.edu.om

Tentative Schedule			
Week	**Lecture #**	**Topic/Material to be covered**	**Assessment**
1.	Lec 1	Add/Drop Course Preamble	
2.	Lec 2	Anaconda™ and Jupyter Notebooks Premier	
3.	Lec 3	Python Numbers, strings, Input, Output, Variable Assignment and scope	
4.	Lec 4	String Slicing, Indexing, properties, methods and formatting	
5.	Lec 5	List and Dictionaries, Tuples	
6.	Lec 6	Comparison, Conditional Flow, and loops	Quiz 1 (10%)
7.	Lec 7	Functions and Methods	Assignment 1 (10%) Due
8.	Lec 8	Object-oriented Programming	
9.	Lec 9	Business Requirements Specification, Components Identification, and architectural design	
10.	Lec 10	Streamlit – Towards GUI Design	Quiz 2 (10%)
11.	Lec 11	Business Logic/Requirements Development	
12.	Lec 12	Implementation: Integrating Design and Development	
13.	Lec 13	Implementation: Integrating Design and Development	
14.	Lec 14	Project Review and Discussion	Project (30%) Due
15.	Lec 15	Project Evaluations	
Exam II (35%)			

Course Learning Outcomes (CLOs)

CLO	Bloom's Level
1. Examine problem-specific business requirements	Level 3– APPLY
2. Determine the basic facts, such as Environmental, Structural, and Behavioral, that are used to organize the application of programming effort to solve a problem	Level 3 - APPLY
3. Specify the software system architecture such that the principal components and dependencies of the system are visible and comprehensible	Level 3 APPLY
4. Analyze and Evaluate the lateral components and libraries that the designed and developed system will depend on	Level 4 ANALYZE, and Level 5 EVALUATE
5. Develop the programming code implementation that realizes the system architecture and design	Level 6 – CREATE

APPENDIX B: ADDITIONAL INFORMATION

CEPS MISSION AND VISION STATEMENTS

Vision
To be internationally recognized for excellence in business and political science education, research and contributions to socio-economic development.

Mission
To provide a learning and research environment benchmarked to international business and political science standards and engage in national and international strategic partnerships in order to contribute to national development.

Values

- Excellence
- Integrity
- Equity
- Collegiality
- Commitment
- Ethics
- Agility

CEPS Graduate Attributes

CEPS 1 Business knowledge: Able to have relevant and contemporary business knowledge and concepts

CEPS 2 Business Problem Inquiry: Able to use analytical skills in identifying and applying the appropriate problem solving methods and tools in business context.

CEPS 3 Professional communication: Able to communicate effectively and professionally in business environment.

CEPS 4 Team work skill: Able to collaborate effectively with peers (people with diverse backgrounds)

CEPS 5 Life-long learning: Able to continuously acquire knowledge to evaluate business-related opportunities in a changing business environment.

CEPS 6 Entrepreneurship culture: Able to relate entrepreneurship knowledge and know-how in business settings.

CEPS 7 Ethics and active citizenship: Able to act in accordance to the ethical, sustainable, and social responsibilities involved in workplace.

CEPS 8 Information and communication technology Experience: Able to utilize information technology for business communication and decision making

Alignment of CEPS Gradute Attributes with SQU Graduate Attributes

CEPS Graduate Attributes	SQU Graduate Attributes
CEPS1	A1,C
CEPS2	A1, A3, B2, C
CEPS3	A1,A2, B1, B2,C
CEPS4	A2, B1, B4
CEPS5	A1, A3, B1, B2, C
CEPS6	A1, A3, C
CEPS7	B1, B3, C
CEPS8	A1, A2