اعتماد
NCAAA

T4

2020

Course Specifications

Course Title:	Operation research in finance
Course Code:	388-FIBA
Program:	Bachelor of Business Administration
Department:	Finance and Banking
College:	College of Business Administration
Institution:	**Jazan University**

Table of Contents

A. Course Identification

1. Credit hours:	

2. Course type

a.	University	☐	College	☐	Department	**X**	Others	☐
b.		Required	**X**	Elective	☐			

3. Level/year at which this course is offered:
Level 7

4. Pre-requisites for this course (if any)**:**
None

5. Co-requisites for this course (if any)**:**
None

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom		
2	Blended		
3	E-learning		
4	Distance learning	45	100%
5	Other		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	Lecture (Blackboard)	45
2	Laboratory/Studio	
3	Tutorial	
4	Others (specify)	
	Total	45

B. Course Objectives and Learning Outcomes

1. Course Description

Operations research in finance is the methodology which aims to explain the phenomena to be studied numerically, using metrics. This course provides the necessary skills that how the mathematical formulae can be applied in the field of finance.

2. Course Main Objective

After completion of this course, the students are expected to develop a good sense of understanding and numerical skills commonly used in financial related matters.

3. Course Learning Outcomes

CLOs	Aligned-PLOs

	CLOs	Aligned-PLOs
1	**Knowledge and Understanding**	
1.1	The student will be able to identify concepts, principles, and theories related with mathematical calculation used in finance.	**Identify** fundamental concepts, principles, and theories related with dynamic Finance and Banking environment.
1.2	The student will be able to relate recent mathematical trends and current statistical research models in the field of finance.	**Relate** recent trends and current research in the field of Finance and Banking.
1.3	The student will be able to justify current mathematical and statistical trends of financial operations.	**Justify** current trend in the field of various industries belonging to Finance and Banking
2	**Skills :**	
2.1	The student will be able to apply mathematical tools to measure and explain the trade-off between risk and return.	**Apply** various tools to solve finance and banking related problems
2.2	The student will be able to formulate investment decisions based on healthy financial strategies.	**Produce/formulate** healthy financial strategy to reduce market risk in the field of finance and banking.
2.3	The student will be able to demonstrate investigative skills in the area of operation research in finance.	**Demonstrate** investigative skills in the area of finance and banking through research projects and case studies.
2.4	The student will be able to evaluate project cash flows to distinguish between value-creating and value destroying investments.	**Evaluate** financial performance by comparing and analyzing actual results with plans and forecasts
3	**Values:**	
3.1	The student will be able to apply ethical practices in measuring financial risk and return highest level of commitment in serving the community, protect the environment, and to comply with the cultural diversity.	**Apply** ethical practices in Finance and Banking with highest level of commitment in serving the community, protect the environment, and to comply with the cultural diversity.
3.2	The student will be able to demonstrate their commitment and loyalty to the corporation or investor they will work with.	**Demonstrate** the ability to work effectively as a member or leader of team to accomplish a common goal in the field of Finance and Banking.
3.3	The student will be able to integrate their abilities of problem solving and decision making into the benefits of the society and social issues of the community.	**Integrate** the attributes of social responsibility, trustworthiness, distinction to contribute for developing a knowledge-based economy and society.

C. Course Content

No	List of Topics	Contact Hours
1	Unit 1: Review of elementary mathematics and its application in finance	15
2	Unit 2: Value of money	09
3	Unit 3: Return and risk	12
4	Unit 4: Introduction to SPSS	09
5		
...		
Total		45

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	The student will be able to identify concepts, principles, and theories related with mathematical calculation used in finance.	Lectures, handouts.	Quiz
1.2	The student will be able to relate recent mathematical trends and current statistical research models in the field of finance.	Projects, assignments	Class discussion
1.3	The student will be able to justify current mathematical and statistical trends of financial operations.	Numerical applications	Home Assignments
2.0	**Skills**		
2.1	The student will be able to apply mathematical tools to measure and explain the trade-off between risk and return.	deliver lectures, refer the students some text books	On line presentation
2.2	The student will be able to formulate investment decisions based on healthy financial strategies.	Developed and explain a case study	Class presentation
2.3	The student will be able to demonstrate investigative skills in the area of operation research in finance.	Solve Problems	Numerical applications
2.4	The student will be able to evaluate project cash flows to distinguish between value-creating and value destroying investments.	Solve Problems	Numerical applications
3.0	**Values**		
3.1	The student will be able to apply ethical practices in measuring financial risk and return highest level of	Debates	Debate competition

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
	commitment in serving the community, protect the environment, and to comply with the cultural diversity.		
3.2	The student will be able to demonstrate their commitment and loyalty to the corporation or investor they will work with.	Group research	Project discussion
3.3	The student will be able to integrate their abilities of problem solving and decision making into the benefits of the society and social issues of the community.	encouraged students to make use of Web sites to support research and reading.	On line research

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Application1 : Summation	Week1	5%
2	Application2: products and mathematical manipulation	Week2	5%
3	Application3: Solving systems of equations	Week3	5%
4	Application4: Discounting and present value	Week4	5%
5	Mid Term exam	Week8	20%
6	Application5:Purchase power parity	Week11	5%
7	Attendance and assignment	Week 13	5%
8	Final exam	Week 15	50%

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :
Sunday & Tuesday : 8-9 a. m
Monday: 10 – 11 a. m

F. Learning Resources and Facilities
1.Learning Resources

Required Textbooks	
Essential References Materials	Operations Research: An Introduction: International Edition, 9/E Hamdy A. Taha, *University of Arkansas* ISBN-10: 0131391992 • ISBN-13: 9780131391994
Electronic Materials	
Other Learning Materials	Course material

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Classrooms, laboratories
Technology Resources (AV, data show, Smart Board, software, etc.)	Data show, Smart Board, SPSS software
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Online teacher evaluation	students	indirect
Class room feedbacks keeping anonymity of evaluators	students	direct
Peer evaluations	Peer reviewer	direct

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	QUALITY COMMITTEE
Reference No.	CS-FIBA388-20212
Date	13/01/2021