



**Jordan University of Science and Technology**  
**Faculty of Computer & Information Technology**  
**Computer Information Systems Department**

CIS431 Decision Support Systems And Intelligent Systems

First Semester 2020-2021

**Course Catalog**

3 Credit Hours. This course describes decision support systems and how business intelligence technologies can support decision making. Multiple topics are introduced ranging from management support systems to machine learning methods.

**Text Book**

<b>Title</b>	Business Intelligence and Analytics: Systems for Decision Support
<b>Author(s)</b>	Efraim Turban, Dursun Delen, Ting-Peng Liang, Ramesh Sharda
<b>Edition</b>	1st Edition
<b>Short Name</b>	B1
<b>Other Information</b>	

**Course References**

Short name	Book name	Author(s)	Edition	Other Information
B2	The Elements of Statistical Learning	Trevor Hastie, Robert Tibshirani, Jerome Friedman	2nd Edition	
B3	Data Mining: Concepts and Techniques	Jiawei Han	3rd Edition	
B4	Introduction to Information Retrieval	Christopher D. Manning, Prabhakar Raghavan and Hinrich Sch?tze	1st Edition	

**Instructor**

Name	<b>Dr. Ahmad Mustafa</b>
Office Location	-

Office Hours	Sun : 10:30 - 11:30 Sun : 13:00 - 14:00 Mon : 10:30 - 11:30 Mon : 13:00 - 14:00 Tue : 10:00 - 11:00 Wed : 10:30 - 11:30
Email	ammustafa@just.edu.jo

Class Schedule & Room
Section 1: Lecture Time: Mon, Wed : 11:30 - 13:00 Room: منصة الكترونية

Prerequisites		
Line Number	Course Name	Prerequisite Type
1743210	Cls321 Data Mining	Prerequisite / Study
1743520	Cls352 Business Process Management	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	Topic	References
Weeks 1, 2, 3	Regression	<b>Chapter 3</b> From <b>B2</b>
Week 4	Perceptrons	<b>Chapter 4</b> From <b>B2</b>
Weeks 5, 6	Artificial Neural Networks	<b>Chapter 11</b> From <b>B2</b>
Week 7	Evaluation of Intelligence methods	<b>Chapter 8.5</b> From <b>B3</b>
Week 8	Support Vector Machine (SVM)	<b>Chapter 12</b> From <b>B2</b>
Weeks 9, 10	Data Representation	<b>Chapter 6</b> From <b>B4</b>
Weeks 11, 12, 13, 14	Fundamentals of Decision Support Systems	<b>Chapters 1 and 4</b> From <b>B1</b>

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
The student should be able to understand the principles of decision making model and theoretical foundation of DSS. [1SO1]	20%	
The students should be able to understand the techniques of machine learning and how to apply them in practice [1SO2]	30%	
The student should be able to better recognize the implementation of ANN algorithm [1SO6]	30%	
The students should be able to improve their technical skills through use of appropriate tools and software [1SO2, 1SO6]	20%	

Relationship to Program Student Outcomes (Out of 100%)																
A	B	C	D	E	F	G	H	I	J	K	SO1	SO2	SO3	SO4	SO5	SO6
											20	40				40

Evaluation	
Assessment Tool	Weight
First Exam	20%
Second Exam	20%
Assignments	20%
Final Exam	40%

Policy	
Attendance	1. According to the JUST policy, a student will receive the grade of ZERO (35%) ?failed for absence? if he misses more than 20% of the classes, (2) Attendance will be taken by calling the names or passing a sign-up sheet, (3) If you miss a class, it is your responsibility to find out about any announcements or assignments you may have missed
Participation	Participation in the class will positively affect your performance. Disruption and side talks will possibly result in dismissal from class

Date Printed: 2020-10-25