

**NEW JERSEY INSTITUTE OF TECHNOLOGY**  
**School of Management**

<b>Course Title: Decision Support Systems</b>	<b>Semester: Fall 2016</b> September 12 to December 12, 2016
<b>Course Number: MIS-648-101</b>	<b>Instructor: Jerry Fjermestad, Ph.D.</b> <b>Professor, SOM</b>
<b>Class Timings: Monday 6:00PM to 9PM FH-207 with WebEx. Tuesdays 7PM to 8PM</b>	<b>Office: Central Avenue Building, 3rd Floor</b> – CAB 3031
<b>Office Hours: M/T 3:45 to 5:45PM</b>	<b>Telephones: 973-596-3255</b>
<b>Email: Moodle</b>	<b>Prerequisites: Graduate Standing; MIS-645 or IS-677</b>

**Textbook: NOT REQUIRED**

Sharda, R., Delen, D., Turban, E. (2014). Business Intelligence A Managerial Perspective on Analytics, Pearson, Third Edition, ISBN-13:978-0-13-305105-6 (Paper Back).

**Articles and Materials on Moodle (<http://Moodle.njit.edu> )**

**Description:** Decision Support Systems (DSS) represents a point of view on the role of the computer in the decision-making process. Decision support implies the use of computers to do: assist managers in their decision processes; support rather, than replace managerial judgment; and improve effectiveness of decision making rather than just its efficiency. The course will focus on business intelligence and data warehousing how they can be used to improve the quality of management decisions.

**Honor Code**

Any evidence of cheating in any form, including plagiarism, will be dealt with according to the honor code of NJIT (course failure and suspension or expulsion). Please note: There will be no warnings or chances with regard to cheating. Any discovered case of cheating will be immediately passed to the Dean of Students for further investigation.

***This is your warning now.*** Cheating is not worth it - you may not only fail this course, but also be suspended from NJIT. The full text of the NJIT Honor Code is available for your review at <http://www.njit.edu/academics/honorcode.php>

**Objectives:**

- To develop skills to critically analyze business problems
- To develop analytical skills to solve business problems
- To develop ability to make effective presentations
- To develop the ability to effectively and convincingly communicate your position in a rational manner
- To develop management and leadership skills
- To develop a sense of ethical and professional behavior
- To develop familiarity and competence with business software packages
- To understand the varied use of technology within the business context
- To understand how the organization's structure, strategy, and practices change with technology
- To Recognize when information is needed, locate it efficiently, evaluate its relevance, authoritativeness and validity, use it to build new knowledge, and communicate that knowledge.

**Methods:** Lectures, discussions, written assignments (review articles), case studies and projects, data analysis, guest speakers, and demonstrations.

**Evaluation:** Grades will be primarily based on:

- Data assignments (Individual) 2 each worth 20%, Total 40%  
Data Assignment 1: Moving and preparing Data- from Excel or Access to Mini-Tab, SPSS, or SAS  
Data Assignment 2: Analyzing the data-
- Team DSS Project report, and presentation (1) - 55% ; Due August 2 with presentation.
- One discussion 5%.

## **Data assignments (Individual) 2 each worth 20%, Total 40%**

The data assignments are to be submitted at 6:00PM in class. They are to be hard copy (Paper). The files are also to be posted in Moodle.

Due: September 26, 2016 at 9:00AM

Data Assignment 1: Moving and preparing Data- from Excel or Access to Mini-Tab, SPSS, or SAS. Analyze and interpreted the results in each

- Show the Excel data set (one page)
- Show the import into Mini-Tab, SPSS or SAS
- Use the software package to label and describe the data
- Show appropriate graphs and charts
- Show a crosstab

Due: Oct 24, 2016 at 9:00AM

Data Assignment 2: Analyzing the data- Submit in class a hard copy. Analyze and interpreted the results in each

- Compare two of the independent variables
- Run a t-test
- Run an analysis of variance
- Run a regression
- Run a Chi-Square

## **Decision Support Systems Project Guidelines (Team) 55% Due 12/12/2016 at 9:00am in Moodle; presentation in class**

Build a data and business intelligence system. This can be an internal or external or both type of problem. Integrate the course concepts into Part I (1 and 2). Use references, at least 10; 3 must be academic. The report is to be structure as below and use the subheadings.

I hope we will have three Business Intelligence systems to work with. Microstrategy, Auspicate, and Cognos.

### **Project Topic & Outline**

Define the problem.

1. Develop a proposal (Justification, Benefits, Integrate with course material and other internet and academic research material)
2. Find data
3. Build an Access and or Excel model. Build a MiniTab, SPSS or SAS data model.  
Show queries in either Access or Excel.

4. Summary  
Research question  
Contribution
5. What are the Attributes, Independent, and dependent variables?
6. What are the dimensions of the model?

**Build the BI model, write the report and PowerPoint Presentation; Present on-line.**

7. Implement the system using software using: Excel, Minitab or SPSS, Access, Tableau and Microstrategy.
8. Compare and contrast Tableau with Microstrategy.
9. Present the system- Demonstration of systems and presentation of steps 1-6, use overheads and Presentation software (i.e. PowerPoint).
10. Submit all three parts to the final DSS Team Project Due 8/2/2016
11. Team#.doc; Team #.ppt; Team#.zip (for other materials)

Graphs, charts, diagrams, tables, flow charts, pictures and drawings are welcome. This can be a real system or a potential system.

Optional Project: Team based term paper. Discuss with instructor before beginning. All projects are to be presented in class.

## Grading Policy

<ul style="list-style-type: none"> <li>• A 93 and up</li> <li>• B+ 88 to 92</li> <li>• B 78 to 87</li> </ul>	<ul style="list-style-type: none"> <li>• C+ 76 to 77</li> <li>• C 65 to 75</li> <li>• F less than 65</li> </ul>
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