

ISE 201

Data Management and Display

Spring 2008

Course Code: 04008

Faculty: David Koonce

Office: 283 Stocker Center

Time: T Th 10:10 A.M. →12:00

Place: 166 Stocker

Email: koonce@ohio.edu

Prereq: MATH 163A OR 263A

Off. Hours: 8-10 TTh

Text: 1) On-line notes
2) The Visual Display of Quantitative Information – 2nd Edition, Edward Tufte, Graphic Press, 2001, ISBN: 0-9613921-4-2

Course General Objective:

This course is designed to present how data, primarily numeric, can represent systems. In problem solving, it is often important that a system be represented in an abstract format that supports analysis and visualization. A poor representation can make a simple system appear complex. This course focuses on the dimensionality of the data and common formats for data in structured problem solving.

Course Specific Objectives:

At the end of this course students should be able to:

- Identify types of numbers used to represent system.
- Determine if a measurement is objective or subjective.
- Understand sources of measurement error.
- Calculate simple descriptive statistics.
- Plot simple charts in a spreadsheet.
- Build a simple database.
- Write basic SQL queries.
- Create pivot tables.
- Read and create HTML and XML files.

Grade distribution:

- Course Work **30 %**
 - Homework
 - In-class labs
- Internet work **10 %**
 - Blog
 - Wiki
- Final Data Presentation Project **10%**
- (3) Mid-term Examinations **30%**
- Final Examination **20%**

Homework, Make up quizzes, midterms, and final policy:

Each week will have a homework assignment due from the previous week' material. This assignment will be due at the start of class on Tuesday Morning. **No Late Submissions will be accepted.** If you will miss class, please email the solutions by the deadline.

Missed exams may only be made up when a legitimate class absence occurs.

Final grades will be assigned using the following scale. If necessary, grades will be rounded up. (No student's grade will be rounded down.)

	A=93-100%	A-=90-92%
B+=87-89%	B=83-86%	B-=80-82%
C+=77-79%	C=73-76%	C-=70-72%
D+=67-69%	D=63-66%	D-=60-62%
Below60%=F		

Attendance policy:

Class attendance is encouraged, and required, each student is allowed three (3) absences. Each absence after the first three will result in a loss of one (1) point off the final grade.

Scholastic dishonesty policy:

The university defines academic dishonesty as "Dishonesty or deception in fulfilling academic requirements. It includes, but is not limited to cheating, plagiarism, un-permitted collaboration, ... fabrication ... *(of data)*..., using advantages not approved by the instructor (e.g., unauthorized review of a copy of an exam ahead of time), knowingly permitting another student to plagiarize or cheat from one's work, or submitting the same assignment in different courses without consent of the instructor." Any academic dishonesty will result in a grade of 0 on the assignment **and** referral to University Judiciaries.

Course Topics & Calendar

ISE 201 - Spring 08

			Notes Material		Tufte Book
Week 1	Tuesday	04/01/08	Intro - Types of Numbers, Types of Values	Chapter 1	Chapter 1
	Thursday	04/03/08	Measurement, Analysis		
Week 2	Tuesday	04/08/08	Error Random Variability, Error Measurement	Chapter 2	Chapter 2
	Thursday	04/10/08	Accuracy and Precision, One Dimension Collections	Chapter 3	
Week 3	Tuesday	04/15/08	Spreadsheets, Summary Statistics		Chapter 3
	Thursday	04/17/08	Common One Dimensional Charts		
Week 4	Tuesday	04/22/08	Other Simple Charts. Exam #1	Chapter 4	Chapter 4
	Thursday	04/24/08	Two Dimensional Data, Venn Diagrams		
Week 5	Tuesday	04/29/08	Bivariate Displays, Correlation		Chapter 5
	Thursday	05/01/08	Gantt Charts, Databases		
Week 6	Tuesday	05/06/08	Simple SQL/QBE, Higher Dimension Data (3+)	Chapter 5	Chapter 6
	Thursday	05/08/08	Nested Tables, 2-D flattened		
Week 7	Tuesday	05/13/08	Surfaces/Plots, Pivot Tables/Plots	Chapter 6	Chapter 7
	Thursday	05/15/08	Exam #2 , Hierarchical Data		
Week 8	Tuesday	05/20/08	Nested Lists, Trees		Chapter 8
	Thursday	05/22/08	Hypertext, XML		
Week 9	Tuesday	05/27/08	Displays, Network Data, PERT/CPM.	Chapter 7	Chapter 9
	Thursday	05/29/08	Topology Diagrams, Spatial Data. Review		
Week 10	Tuesday	06/03/08	Exam #3 , Presentations		
	Thursday	06/05/08	Presentations		

Final Exam - Monday, June 9, at 8:00 a.m.