BCIS 4660.001 & .002
Data Warehousing

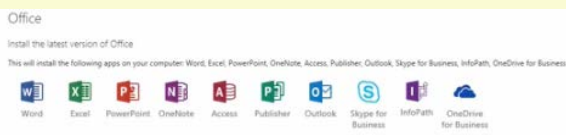## Fall 2016

Revised: 29-Aug-16

Instructor: Dr. Jack D. Becker Skip to Hwk; Skip to Syllabus (.pdf)
Office: 312A BLB (click for map)
Telephone: Office: (940) 565-3113/3110
Fax: Office: (940) 565-4935
E-mail: becker@unt.edu

OFFICE HOURS

Thurs: 1-2 pm & 5-6 PM; and by appointment

Grade Books – Fall 2016:	Section 1 (Thurs/Day) Updated ***NO***	Section 2 (Thurs/Eve) Updated ***NO***

General Class Resources:		UNT 36- UNLV 14; Heart of Dallas Bowl Game; 39,000 Fans	GARTNER Magic Quadrant for BI Analytics Platforms (2015) OLD
Service	**Component**	**Weblinks 1**	**Weblinks 2**
Tutors:	BCIS 4660 TUTOR TIMES NO	Updated **NO**	
Team Assignments:	Section 1 (Day) Teams TEAM CHOICE:.PPT / .PDF Updated **NO**	Section 2 (Eve) Teams TEAM CHOICE:.PPT / .PDF Updated **NO**	
Team Evaluations Blank forms	Team Evaluation Form [.pdf]	Team Evaluation Form [.doc]	
Practice Exams & Study Guides:	PRACTICE MIDTERM EXAM NEW	Midterm Exam Study Guide NEW	PRACTICE FINAL EXAM NEW	Final Exam Study Guide FINAL EXAM notes
ONLINE Textbook Resources	Pratt & Last 8th ed. Student Resources NEW		Adamson & Venerable, Chap 1	Jukic, Chap 1 NEW ERDPlus NEW

SQL References:	SQL Reserved Words	SQL References [Pratt & Adamski]: Appx B Appx C
Semantic Object Models (SOM)	Semantic Object Model Notes (Supplemental Chapter Appendix E)	TABLEDESIGNER [.exe; 8 Mb] **FREE Software; for BONUS Hwk #6.B**
NEW Course Software Policy (eff Fall 2015) **VMWare and New RDS Application Streaming sytem:**	1. Students will still be able to access the **VMWare View** via laptops from CoB lab checkout and classroom carts for instructional classroom lead activities. 2. **Adobe applications** will need to be accessed through the physical lab in rooms 185 and 190 for homework and assignments starting in the Fall 2016 unless students wish to install Adobe on their own laptops or desktops. Note: **Students have the option of downloading Office 2013 for Windows or Mac via their Office365 link in webmail for free.** 3. For products not Adobe related will be available to students to access via our new: **RDS System (Application Streaming) https://cob-rds.cob.unt.edu/rdweb** 4. CoB Labs: Open Monday-Sunday: **http://cob.unt.edu/lab/hours.php**	
OFFICE 365 FREE & Adobe Creative Suite $19.99/month	**MS Office 365 FREE** Office Install the latest version of Office This will install the following apps on your computer: Word, Excel, PowerPoint, OneNote, Access, Publisher, Outlook, Skype for Business, InfoPath, OneDrive for Business Word Excel PowerPoint OneNote Access Publisher Outlook Skype for Business InfoPath OneDrive for Business **Video click above**	**Lots of Adobe Products …click for video** Adobe Creative Cloud
VMWare is Back! 2016 **Fall semester NEW, and OLD!**	**VMWare is now available AGAIN on a needs basis: Request Form for all COB students on our Web site:** **http://cob.unt.edu/lab/vmware-access-request.php** **In addition, students can find useful information about UNT COB virtual labs at this site:** **http://cob.unt.edu/lab/virtuallab.php** **http://cob.unt.edu/lab/rdsvirtuallab.php**	
Jobs Center ****NOT NEW**** **HELP WANTED** **BI/BA Jobs in TX (Dake & Becker Survey) 10-2015**	• **Hot BI Trends for 2016 (Tableau Research Paper)** NEW • **2016 Robert Half Salary Guide** NEW • **IT Career Paths for Women** NEW • **What is a Wireless Network Engineer?** NEW • **Mobile App Developer** NEW • **USA Today; Job Talks with Korn-Ferry CEO 2015-10-15** NEW	

Homework / Assignment	Assignment Guidelines: (Due: Tu/Th); Scoresheets	End of Chapter Questions [EOCQs]; Hints & Tips
General Access Hints	**BCIS 4660 Software HELP** NEW **ACCESS RESERVED Words** NEW **Becker's Rules TBA in class**	Access Tabbed Documents opt. NEW *** **ASSIGNMENT TEMPLATE** NEW ***
1 (10)	Assign. #1 **DUE: Sep 6/8** OLD	EOCQ1; Hints&Tips; NEW Access 2007/2010 Tutorial
2 (10)	Assign. #2 **DUE: Sep 13/15** OLD	EOCQ2; Hints & Tips; NEW
3.A (10)	Assign. #3.A **DUE: Sep20/22** OLD	EOCQ3; Hints & Tips; NEW
3.B (10)	Assign. #3.B **DUE: Sep 27/29** OLD	EOCQ4; Hints & Tips; NEW
4 (20) ERD S/W:	Assign. #4 **DUE: Sep Oct 4/6** OLD **ERDPlus Software**	EOCQ5; / EOCQ6 Hints & Tips; NEW ERD Tutorial; Chap 2 Jukic
5 (20)	Assign. #5 **DUE: Oct 11/1** OLD	Hints & Tips (5) NEW
6: Team Projects	Assign. #6 **DUE: Oct xx** OLD Extra FL Data (Zip File); NEW	Hints & Tips (6) --- TIME2015 (.accdb file) OLD Pre-Hints
TableDesigner Software	Assign. #6.C (BONUS) **DUE: Oct xx** OLD SOM: Appendix E (.pdf); NEW	SOM Tutorial; NEW **TABLEDESIGNER [.exe; 8 Mb] FREE Software; for BONUS Hwk #6.C (10 pts)**
7	Assign. #7 **DUE:Apr 7** OLD **Assign.#7Sec1.ZIP --- T1-T10** **Assign.#7Sec2.ZIP --- T1-T14** **Pool Zip Assign. #7 T15 (2), T16 (2), T10C (5 teams)**	Hwk #7 Hints & Tips OLD Assign. #7.Sec1 HINTS OLD Assign. #7.Sec2 HINTS OLD Pooled DATA Hints Yes! Teams1-20 TAL –Yes--
8	Assign #8 DUE:Apr 21 OLD	Hwk #8 Hints & Tips; New More Hints Part 2 New Transformation Maps New Hwk #8 TeamMatrix_Sec1 --- Hwk #8 TeamMatrix_Sec2 ---
9	Assign. #9 **DUE: May 5** OLD **Assign. #9.4 is also #10**	Hwk #9; Menus & Access Switchboards New
9 Hints:	**Executive Summary Guidelines**	
10	Assign. #10 **DUE: May 5** OLD **Assign. #10 (9.4) .ppt Presentation**	Hwk #10; **Presentation in class**

REQUIRED TEXTBOOK

1. Pratt and Last, *Concepts of Database Management, 8*th Edition, Cengage Learning Technology, 2015   **ISBN**: 978-1-**285-42710-2**

OPTIONAL TEXTBOOKS [Handouts Provided]

2. Jukic, Vrbsky, Nestorov, *Database Systems: Introduction to Databases and Data Warehouses*, Pearson, 2014. **NOTE**: Materials from this book will be provided in class. **ELink**
3. Grauer, Robert T., *Access 2013 Comprehensive*, Pearson, 2014. **[BCIS 3610]**
4. Adamson, Christopher, *The Complete Reference: Star Schema*, McGraw Hill, 2010. Based upon his 1998 classic below.
5. Adamson, Christopher and Venerable, Michael, *Data Warehouse—Design Solutions,* Wiley, 1998. **Classic Text.**
    NOTE: ONLY selected chapters from this book will be covered in class.
    Handouts will be provided.

COURSE PREREQUISITES

BCIS 3610 and ACCT 2010 & 2020 with grades of C or better; DSCI 3710 or 3870; 2.7 GPA. Grades of C or better in each previously taken BCIS and DSCI course, or consent of department.

COURSE DESCRIPTION & PURPOSE

This course investigates model-based approaches to the design of decision systems for business and industry. This includes exploring techniques for data management such as data warehousing, data mining, and data visualization for decision-making in management, management science and accounting. Emphasis will be placed upon data mining techniques for financial auditing. This course was designed for Accounting majors.

GRADING [Approximate points]

Quizzes	6%	35 points
Other Instructor's Perorgative	2%	10 points
Midterm Exam	24%	120 points
Final Examination	24%	120 points
Projects & Assignments	44%	225 points
Totals (subject to chg.)	**100%**	**510 points**

Generally course grades will be posted via my website **(see below)**. Incomplete grades will not be given. Final course grades will be based on total points accumulated and the subject judgment of by the instructor of your performance in this class. Final grades will not be posted. Please send Dr. Becker an e-mail at <u>becker@unt.edu</u> if you wish to receive information regarding your final grade. <mark>An "A" is 460 points. If achieved at any point during the semester, you will receive an A in the course.</mark>

COURSE DATASETS

Several course datasets (TAL Distributors and Colonial Adventure Tours) may be found below. An addition database, Solmaris Condimium Group, which we will not be using this semester, is also available.

TAL DISTRIBUTORS (1 VERSION)
- **TAL Distributors.accdb (Access 2010/2013)** ****New****

COLONIAL ADVENTURE TOURS (1 VERSION)
- **ColonialAdventureTours.accdb (Access 2010/2013)** ****New****

SOLMARIS CONDOMINIUM GROUP ACCESS Database
- **SolmarisCondimiumGroup.aacdb (ACCESS 2010/2013)** ****New****

We may also be using several databases on the Teradata Network site: <u>www.TeradataStudentNetwork.com</u>; **IDs and passwords (provided as needed)**

COURSE PROCEDURES AND REQUIREMENTS

The content of this course will be found in selected chapters in the required texts, lectures, notes, Power Point presentations, assigned readings, **BlackBoard** forums and the application of various software packages.

You will find much of this subject matter posted on my website. Some of the content is published in .doc (Word) or .pdf (Adobe) format. If you are working at home and do not have Adobe Acrobat on your machine you may download it from: <u>http://www.adobe.com/products/acrobat/readstep.html</u>

Class Participation
Oral reports, class discussion, topic reports, summarized articles, pop quizzes, etc.

Examinations
The exams will be closed-book. Quizzes will be open or closed book at the instructor's discretion. Early exams will not be given (some extenuating circumstances may apply). Late quizzes will not be given. Make-up exams will not be given. Final examination will be comprehensive (at least semi-comprehensive) of all subject matter.

Homework, Projects, and/or Assignments

Problems, cases, and readings will be assigned to support and supplement course subject matter. Each assignment which you turn in must have a separate cover sheet when submitted. This cover page must contain the following information which is typed and centered on the page - your name (Last Name First), the assignment number, the due date for the assignment, the topic of the assignment, Text Title (if any), Chapter (if any) and page number (if any), place a computer generated date stamp on all computer output. All assignments are due at the beginning of class on the date due. Late assignments may be turned in for partial credit, depending upon your circumstances.

All assignments must reflect your original work. Team assignments will include a team member evaluation sheet, which each team member must complete.

Disability Accommodation

The College of Business Administration complies with the American with Disabilities Acts in making reasonable accommodation for qualified students with disability. If you have an established disability as defined in the Americans with Disabilities Act and would like to request accommodation from the Disability Accommodation Office, Union Building.

Attendance

Regular and punctual attendance is essential for this course. While attendance will not be taken, Pop quizzes will be given throughout the semester. If you are not present, you cannot retake the quiz.

Missed Classes

The student is responsible for obtaining material, which has been distributed in class including assignments and assigned readings. Make a friend in the class and use him/her as your source for missed materials. Generally extra copies of handouts will be placed in my course cabinet outside my office.

Course Communications

All students will use BULK MAIL Email all communication with Dr. Becker or questions about class or assignments. Access your Email regularly--at least once each week. You may use my personal Email: becker@unt.edu for course questions. Be sure to put **BCIS 4660** in the Subject line.

ETHICAL BEHAVIOR IN BCIS CLASSES

The ITDS Department expects its students to behave at all times in an ethical and legal manner. There are at least two reasons for this. First, ethical behavior affirms the personal value and worth of the individual. Second, both IT and Decision Science professionals frequently handle confidential information on behalf of their employers and clients. Thus employers of BCIS and DSCI graduates expect ethical conduct from their employees because that behavior is crucial to the success of the organization.

Academic dishonesty is a major violation of ethical and legal behavior. The ITDS Department defines academic dishonesty as claiming the work of others as your own, or using illegal or unapproved means to raise your grade in a class. Examples include: copying answers from another person's paper; using unapproved notes during an exam; copying computer code from another person's work; having someone else complete your assignments or take tests on your behalf; stealing code printouts, software, or exams; recycling assignments submitted by others in prior or current semesters as your own; and copying the words or ideas of others from books, articles, reports, presentations, etc. for use as your own thoughts without proper attribution (i.e., plagiarism). It does not matter whether you received permission from the owner of the copied work; claiming the material as your own is still academic dishonesty.

The ITDS Department believes it is very important to protect honest students from unfair competition with anyone trying to gain an advantage through academic dishonesty. Consequently, there will be in-class testing to validate all major assignments you complete out of class. This may be accomplished by examination, oral reports, individual interviews or any other means your professor may deem appropriate. You must pass these validation tests with a grade of "C" or better to have your out-of-class work count in your term grade. Further, the student grade for academic dishonesty in BCIS classes is an immediate "F" for the course involved and referral of the case to the COBA Academic Advising Office.

By my signature below, I attest that I understand the above policy. I will behave ethically in this class, and will encourage my classmates to behave ethically. I also understand that I have a moral responsibility to report to my instructor any suspected case of academic dishonesty in this class.

The Student Evaluation of Teaching Effectiveness is a requirement for all organized classes in COBA. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching.

_____
Print your name and give your signature.

_____   _____/_____/2016
Student ID number   Today's date

My course scores may be published using the last 5 digits of my student number

(SN) __ __ __ __ __ ; or the following 5-character (numeric) code: __ __ __ __ __.
If both numbers were left blank, your scores will NOT be published.

This is YOUR COPY. Turn in the one below.

BCIS 4660 Data Warehousing; Fall 2016

CLASS SCHEDULE: (Subject to change; effective: 9/30/2016)

Week	§1 & §2 Tu/Th	Topics	Readings	Assign. No.**
* Note: POP Quizzes are always UNANNOUNCED (and cannot be made up) and may include information from either today's or previous lecture(s) on Data Warehousing				
1.1	Aug 30/Sep 1	Introduction to Data Warehousing & Data Mining	Pratt; Jukic, Adamson Introductions	*Pop Quizzes (35-45 pts); does not include Bonus**
1.2		Relational Databases; Access	Pratt 1, Jukic 1 & 3	
2.1	Sep 6/8	Access QBE	Pratt 2	DUE: Assign #1 (10)
2.2		Access SQL	Pratt 2	
3.1	Sep 13/15	Access SQL	Pratt 3; Jukic 5; Appendix B (in Pratt & Last); ACCESS RESERVED Words NEW	DUE: Assign #2 (10)
3.2		Access SQL	Pratt 4; Appendix C (in Pratt & Last)	
4.1	Sep 20/22	Access SQL	Pratt 4; Jukic 2 ERDPlus (software)	DUE: Assign #3.A (10)
4.2		Normal Forms; DBMS	Pratt 5; Jukic 4	
5.1	Sep 27/29	Normal Forms; DBMS	Pratt 5; Jukic 6	DUE: Assign #3.B (10)
5.2		Functional Dependency;DBMS	Pratt 6.Part1; Jukic 7	
6.1	Oct 4/6	Data Warehousing Overview; Dimensional Modeling	Adamson 1 (Data Warehouse)	DUE: Assign #4 (20)
6.2		Fact Tables & Dimension Tables; Retail Sales Models;	Adamson 2 & Home-work #5 & #6 Hints &Tips	
7.1-2	Oct 11/13	Data Warehousing Overview; Dimensional Modeling	Pratt Chap 6.Part2; Pratt Chap. 9.Part1 Jukic 8; EXAM PREVIEW	DUE: Assign #5 (20) 1st Pick Teams
8.1	Oct 18/20	Midterm Exam --Cover thru Class 6.2		Midterm Exam (120 pts)
8.2		AFTER EXAM brief session. PREVIEW Homework #6	Assign. #6 Tutorial (Notes);	
9.1 & 9.2	Oct 25/27	Review Midterm; Data Loading Meta Data;	Homework 6.A & B Hints; SOM Tutorial & (Appx E);	TEAM PROJECTS Commence
10.1 & 10.2	Nov 1/3	Data Warehousing; Chap 9; P1; OLAP; DDBMS; Hwk #7 Tutorial	Pratt & Last 10.2; Jukic 9; SOM; (Appx E); Kimball on EDW; Tutorial on Assign. #7	DUE: Assign #6 (20/20); ERWin/ FL Data
	Sections	Continued ….		

Week	1 & 2 Tu/Th	Topics	Readings	Assn No.**
11.1 & 11.2	Nov 8/10	Homework #8 Preview; Pratt & Last: Chap 9; P2); (OODBMS; Semantic Object Models)	**Adamson 8**; Budget and Spending Data Marts;**;** **Tutorial on Assign. #8 Part 1; Pratt & Last Chap 9 Part 2**	**DUE: Assign #7 (40/10); (Team Project); Return Assign. #6;**
12.1 & 2	Nov 15/17	**Data Warehouses; Adamski & Last (Chap 8, 9); SOMs**	**Pratt 11.2; SOM**; **(Appx E);** **Tutorial 2 on Assign. #8;** **Adamson 8**; Budget and Spending Data Marts; Jukic 9	**DUE: Assignment 6.C (SOM)** **Assign.#7 Return & review**
NO CLASS	Nov22/24	**Thanksgiving BREAK WEEK**		
13. 1 & 2	Nov 29/ Dec 1	Data Mining & Visualization; Design Methodology; Order Management; Key Ratios;	**Assign. #9 Tutorial;** **Assign. #10 Tutorial;** **Adamson 9** Financial Reporting Data Marts; **Pivot Tables/Crosstab Wizard**	**DUE: Assign #8 (40); (Team Project); DAY & EVE**
14	Dec 6/8	Class Presentations Class Presentations; **Hot BI Trends for 2016 (Tableau Research Paper) NEW** **FINAL Exam Preview**	Quizzes and/or Bonus opportunities; Exam Preview FINAL Team Projects Due.	**Assign.#8 Return & review** **DUE: Assign #9 & 10: Final Projects (40 + 15 (Pres.);** **Bonus 10);** **Assign #10: Class Presentations (15 pts)**
15 Dec 13/14	**DAY 1:30-3:30 pm;** **EVE 6:30 – 8:30 pm**	**FINAL EXAM:** *Semi*-**Compre-hensive; optional for some (to be determined during semester)**	**Normal Class Rooms**	**Final Exam (120)**

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may include information from either today's or previous lecture(s) on Data Warehousing

TEAM PREFERENCES DATA

NAME	
PHONE NO.	
EMAIL	
LOCATION PREFERENCE: **E.g., Denton, Carrolton/Lewisville, Plano, DFW Airport, Ft Worth, Sanger, etc.**	
TEAMMATE PREFERENCES	

List up to 3 other names:

1. _____

2. _____

3. _____

TEAM ID: _____

(ASSIGNED BY INSTRUCTOR)

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_____
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_____   _____/_____/2016
Student ID number   Today's date
My course scores may be published using the last 5 digits of my student number

(SN) __ __ __ __ __ ; or the following 5-character (numeric) code: __ __ __ __ __.
If both numbers were left blank, your scores will NOT be published.