

**Carl H. Lindner College of Business
University of Cincinnati**

IS7034: Data Warehousing and Business Intelligence

Spring 2018

January 8 – February 25, 2018

Section 1: Tuesday and Thursday: 4:00 – 5:50pm, Lindner 220

Section 2: Monday: 6:00 – 9:50pm, Lindner 107

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Course Overview & Objectives:

This course is designed for the comprehensive learning of data warehousing technology for business intelligence. Data warehouses have been created to store (archive) data from operational information systems. In the last 10 years, this information technology has matured and found to be very useful in generating valuable control and decision-support business intelligence for many organizations in adjusting to their competitive business environment. As a result, there is now a fairly stable body of knowledge about the design, development and operation of data warehouses, which you will learn in this course. Moreover, students will apply and integrate the business intelligence knowledge learnt from IS7034 in SAP Business Intelligence suite. This course also includes several case studies and a final project. The objectives of this class include:

- Know business intelligence architecture and technologies
- Understand data warehouse concepts and building blocks
- Conduct dimensioning modeling in building data warehouses
- Study the basics of data quality and ETL technology
- Learn the data analysis in OLAP
- Comprehend query, reporting, and BPM
- Practice those techniques in SAP BI suite
- Conduct a case study on dimensional modeling

Pre-requisite: IS6030 or IS7030&IS7032

Required Textbook:

Business Intelligence and Analytics – Systems for Decision Support, 10th Edition, Ramesh Sharda, Dursun Delen, and Efraim Turban, Pearson 2015.

Supporting Textbook:

Business Intelligence: A Managerial Perspective on Analytics, 3rd Edition,
Ramesh Sharda, Dursun Delen, Efaim Turban, Prentice Hall 2013.

Modern Database Management, 11th Edition,
Jeffrey A. Hoffer, V. Ramesh, Heikki Topi, Pearson 2011.

Data Warehouse Fundamentals for IT Professionals, 2nd Edition,
Paulraj Ponniah, Wiley 2010.

Library E-resource: <http://proquest.safaribooksonline.com/9780470462072?uicode=ohlink>

Course Administration:

You are expected to prepare for every class by reading the weekly lecture assignments that will be posted in the Blackboard. Class lectures will discuss extensively on the key concepts and ideas of each topic with additional insight. Most importantly, class lectures will clarify students' questions and initiate the lively discussion. The course involves lectures, in-class labs, 3-4 homework assignments, one midterm exam, and a case study.

I will create an active education environment to motivate you to understand and apply the information technologies for BI implementation. Therefore, attendance and class participation are critical. If your personal schedule entails missing some class sessions (more than 10 hours of classes), please drop this course. If you will be absence from a class, please notify me by email in advance. Absence for a class does not relieve you of your responsibility for the subject matter, assignments when they are due, and other course-related issues discussed during that class period. **"A" student must attend all classes and actively provide thoughtful and relevant comments to class discussions.**

Homework Assignments, Exam, and Final Project:

- There is one 120-minute midterm exam. The midterm exams contain both objective (e.g., T/F, multiple choices, and fill-in) and short-answer questions.
- There are **no** scheduled make-up tests, so it is important that you take all tests at their scheduled times. If you have a problem with a test date for a valid reason like a last minute accident or illness, you *must* contact the instructor immediately by email or phone before the actual test time. Failure to do so will mean getting a zero score. Note that you have to offer formal documents as supporting evidences, such as doctor note (clinic visit summary does not account).
- *Late submissions* of homework **cannot** be accepted unless there is a *real* emergency (job interviews don't qualify) **AND** prior permission of instructor has been obtained.
- You may appeal any score on a test or an assignment, but such appeal must be made in writing or in person **within one week** from the time the test or homework is returned to the class.
- The details of the case study will be announced in week 3.

Course Grade:

Your final course grade will be determined as:

1. Homework Assignments	20%
2. Midterm Exam	40%
3. Case Study	40%
Total	100%

Evaluation:

The final grade will be based on the percentage of the total possible points awarded as follows:

GRADE	Scores	GRADE	Scores	GRADE	Scores
A	100-93	B	82-79	C	68-64
A-	92-88	B-	78-74	C-	63-60
B+	87-83	C+	73-69		

Communication:

Email is the best way to communicate with me. I intend to reply your emails within 24 hours. Therefore, I expect the same courtesy from you. Email will be a very important mode of communication in this class as we meet only once/twice a week. **Please start your subject line of your emails with 'IS7034-00X' (00X is your section number: 001 for the afternoon section, and 002 for the evening section).**

Also make sure to check Blackboard on a regular basis for updates or additional course material. **Please keep your email information on Blackboard up to date. Whenever possible, I will announce changes to the course via the Blackboard announcement function.**

Class Conduct:**IMPORTANT !**

The use of any mobile device, such as laptop, smart phones, etc., during a class session is not permitted unless the instructor has approved its use. Please silence your devices and put them in your bag or jacket. Please be professional!

One of our goals in the College of Business is to prepare you for a professional career and we wish to instill good habits through insisting on a high level of conduct in all your classes. The following behaviors are unacceptable in this class:

1. Not on time
2. Failing to notify the professor by email when you are absent from class.
3. Excessive tardiness/absences.
4. Leaving while class is in session for reasons other than an emergency.
5. Working on non-course related assignments.
6. Falling asleep or resting head on desk.
7. Wearing headphones while class is in session.
8. Web surfing in class
9. Other types of disrespectful behaviors.

Academic Integrity:**IMPORTANT !**

I personally take academic integrity very seriously, and if there are any violations, the consequences will be unfortunate. Please don't take this issue lightly because plagiarism in any form will not be tolerated.

As with all Lindner College of Business efforts, this course will uphold the highest ethical standards, critical to building character (the C in PACE). Ensuing your integrity is vital and your responsibility. LCB instructors are required to report ANY incident of academic misconduct (e.g., cheating, plagiarism) to the college review process, which could result in severe consequences, including potential dismissal from the college. For further information on Academic Misconduct or related university policies and procedures, please see the UC Code of Conduct (http://www.uc.edu/conduct/Code_of_Conduct.html).

Special Needs:

If you have any special needs related to your participation in this class that may influence your performance you should inform and meet the instructor immediately to arrange reasonable provisions to ensure an equitable opportunity to meet all the class requirements.

Weather-Related Policy:

When inclement weather threatens the safety of the University of Cincinnati community, the Senior Vice President for Administration and Finance may invoke University Rule 3361: 10-55-01 and declare an emergency closing. It is possible that only some campuses of the university may close. Please sign our related alert messages on <http://www.uc.edu/alert.html> for latest updates.

If campus closure occurs, lectures will be delivered in online platform at same time slots via Web conference tools (e.g. WebEx). But missed exams will be rescheduled and related details will be announced in email. In cases where an exam make-up session is necessary and students have work commitments or travel arrangements that cannot easily be changed, the student should work with instructors to find a means of accommodation. All assignments are submitted electronically on Blackboard, and therefore their due dates will not be altered, unless other special notices.

Students are expected to make reasonable accommodations in work schedules or travel plans to accommodate weather-related changes. However, instructors will give due consideration to “impossibilities to perform” which might include (but is not limited to): 1. Students without internet access at home; 2. Failures of technology (internet or power); 3. Need for special software or equipment available on campus; 4. Local emergencies that do not close the UC campus but might prevent a student from coming to campus. The student should work with instructors to find a reasonable way to make up missed material.

Closure of the University does not relieve students of the responsibility for completing all required course work. Within practical limits, work should be completed in a timely manner and within stated deadlines. Students are expected to have a valid email address accessible to the instructor through courseware (Blackboard). Students are expected to check email and/or other means of electronic communication for information from the instructor during a closing.

If the University is open, but a student is unable to attend a class or activity due to an emergency declared for their area the student should inform the instructor in a timely manner and pursue appropriate make-up opportunities.

Course Schedule (Tentative):

Module	Topics	Related Chapters
0	Course Introduction and Logistics	Syllabus
1	Business Intelligence and Analytics: Overview <i>SAP Lab 1. Installation and Multi-dimensional Analysis</i>	Sharda: Chapter 1 Handouts
2	Dimensional Modeling: Basics <i>SAP Lab 2. BW Data Modeling</i>	Sharda: Chapter 3 Handouts
3	Data Warehousing: Concepts, Building Blocks & Process	Sharda: Chapter 3 Handouts
4	Data Integration and ETL <i>SAP Lab 3.ETL (1)</i>	Sharda: Chapter 3 Handouts
5	Advanced Dimensional Modeling <i>SAP Lab 4.ETL (2)</i>	Sharda: Chapter 3 Handouts
6	Information Delivery and OLAP <i>SAP Lab 5. Query Design</i>	Sharda: Chapter 3 & 4 Handouts
7	Reporting and BPM <i>SAP Lab 6.BO Explore & Web Intelligence</i>	Sharda: Chapter 4 Handouts