**Syllabus**

**IS 549-901 Data Warehousing**

**Instructor**

Sultan Raziuddin

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Web page:

Office Hours: Tuesday 3.45PM- 5.45pm, then 9:00PM to 10.00 PM by appointment

**Course Meeting**

Tuesdays 5:45PM - 9:00PM **REMOTE ONLY** [Zoom Conferencing](https://depaul.zoom.us/j/391081917?pwd=UjJBQ09YSWNNamFYb1NLY1o2WDU2QT09)

<https://depaul.zoom.us/j/391081917?pwd=UjJBQ09YSWNNamFYb1NLY1o2WDU2QT09>

Check for the password in your email. (**6-digit class code**)

**Preparation**

CSC 451 Database Design or

CSC 455 Database Process for Large Scale Analytics or

CSC 453 Database Technologies

**Course References**

Required: [The Data Warehouse Lifecycle Toolkit](http://www.amazon.com/Data-Warehouse-Lifecycle-Toolkit/dp/0470149779/ref=sr_1_1?ie=UTF8&s=books&qid=1246920265&sr=1-1)by Ralph Kimball et al. 2nd ed. ISBN-10: 0470149779  ISBN-13: 978-0470149775

All the other reading materials are provided online via D2L slides

**Course Overview**

Course focus is on

* Introduction to data warehousing and the foundations of understanding the issues involved in building a successful data warehouse.

Specific topics include :

* Data warehouse development methodology and issues surrounding the planning of the data warehouse.
* Data quality and metadata in the data warehouse.
* Analysis, transformation and loading of data into a data warehouse.
* Development of the data architecture and physical design
* Implementation and administration of the data warehouse.

For project, students will focus on

1. Defining the problem
2. Developing a solution for an organization

**Course Goals**

By the end of the quarter, students will be able to:

1. Understand Data warehousing & essential elements
2. Introduction to ETL & importance of physical architecture
3. Agile approach to Data warehouse
4. Develop DW/BI solution for an organization based on opportunities & requirements

**Assignments**

The dates on which the assignments are due are shown in the course schedule and are due 11:30PM on the due date. These assignments will be available via D2L. Late assignments will not be accepted except for emergencies in which case the instructor must be notified in advance.

**Written Assignments**

All written assignments are short exercises presenting an opportunity for student to demonstrate knowledge of the topic.

**Technical Assignments**

Simple & short technical assignments with or without the use of SQL, Oracle or Access acceptable

**Participation**

Participation in discussion board topics during within the posted week.

**Midterm/Final**

Midterm and Final Exams will be take home type. They will consist of short answer essay type questions so that the student can convey conceptual knowledge of DW, BI strategies and related technologies.

**Project Proposal**

The Student will submit 1 -2-page project proposal for implementation of a Data Warehouse & Business Intelligence program, applications and technologies. The student will identify a business functional areas, problem statement and solution at a high level.

**Project**

Detailed Project requirements & expectations to be posted on D2L. Project generally includes proposed architecture, user requirements, KPI’s, data sources ( internal & external), BI design.

**Policies**

**Changes to Syllabus**

This syllabus is subject to change as necessary during the quarter. If a change occurs, it will be thoroughly addressed during class, posted under Announcements in D2L and sent via email

**Academic Integrity and Plagiarism**

This course will be subject to the university's academic integrity policy. More information can be found at <http://academicintegrity.depaul.edu/>.

The university and school policy on plagiarism can be summarized as follows: Students in the course should be aware of the strong sanctions that can be imposed against someone guilty of plagiarism. If proven, a charge of plagiarism could result in an automatic F in the course and possible expulsion. The strongest of sanctions will be imposed on anyone who submits as his/her own work any assignment which has been prepared by someone else. If you have any questions or doubts about what plagiarism entails or how to properly acknowledge source materials be sure to consult the instructor.

**Grade Determination**



Students receiving more than 90% of possible points are guaranteed at least an A-, more than 80% at least a B-, more than 70% at least a C-, and more than 60% at least a D.

All submitted work (e.g. project, assignments, exams, online discussions) must be original work unless its source is clearly referenced. Failure to clearly attribute quotes or designs from other people's work constitutes plagiarism. Violations will generally receive no credit for a given submission.

The midterm and final exam are Not proctored, comprehensive exam.

**Weekly contribution**: As you know, 10% is assigned to participation, please do participate on online posts.

**Policies**

Students are expected to remotely join every class or watch the lecture online. All assignments are due on the due date by 10.00PM CST. Please notify me ahead of time, if you are going to be late for emergency situations. Late assignments will be accepted up to 3 days late, lowered by 20% as penalty. All grade challenges must be submitted in writing and include an explanation why the given score or grade should be reconsidered.

**Academic Integrity and Plagiarism**

This course will be subject to the university's academic integrity policy. More information can be found at http://academicintegrity.depaul.edu/ If you have any questions be sure to consult with your professor.

**Academic Policies**

All students are required to manage their class schedules each term in accordance with the deadlines for enrolling and withdrawing as indicated in the University Academic Calendar. Information on enrollment, withdrawal, grading and incompletes can be found at <http://www.cdm.depaul.edu/Current%20Students/Pages/PoliciesandProcedures.aspx>.

**Students with Disabilities**

This is a Remote only class.

Students who feel they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss their specific needs. All discussions will remain confidential. To ensure that you receive the most appropriate accommodation based on your needs, contact the instructor as early as possible in the quarter (preferably within the first week of class), and make sure that you have contacted the Center for Students with Disabilities (CSD) at: Lewis Center 1420, 25 East Jackson Blvd. Phone number: (312)362-8002

*School policies on instructor evaluation, email, plagiarism, course withdrawal, absences, incompletes and students with disabilities.*

**Course schedule :**

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| --- | --- | --- | --- |
| **Weekly**  **(Thursdays)** | **Topic** | **Reading** | **Assignment or Exam Due** |
| **Week 1**  March 31st | Course Overview  Life Cycle Overview  Practical Examples and Applications of Data Warehousing | Course Overview  Ch 1 Kimball Life Cycle  Ch 2 Launching and Managing the Program | Introductions |
| **Week 2**  April 7th | Collecting Requirements  Development of Technical Architecture | Ch 3 Collecting Requirements  Ch 4 Intro to Tech Architecture  Ch 5 Creating Architecture Plan | Complete Introductions post |
| **Week 3**  April 14th | Dimensional Modelling | Ch 6 Intro Dim Modelling  Ch 7 Designing Dim Modelling | Written Assignment 1 - Requirements |
| **Week 4**  April 21st | Physical Design | Ch 8 Designing the physical DB | Written Assignment 2 – Technical Architecture  Technical Assignment 1 |
| **Week 5**  April 28th | Review ETL | Ch 9 Intro to ETL  Ch 10 Designing and Developing ETL | Assignment 3 – Data Model  Technical Assignment 2 |
| **Week 6**  May 5th | Overview of BI  Developing BI  Connecting BI to Data Warehouse | Ch 11 Intro to BI  Ch 12 Designing the BI | Assignment 4 - Project Proposal  Midterm  Technical Assignment 3 |
| **Week 7**  May 12th | Deployment Activities of the DW and BI  Change Management | Ch 13 Deploying and Supporting DW and BI | Assignment 5 – BI  Technical Assignment 4 |
| **Week 8**  May 19th | Keeping up with the changes and the business | Ch 14 Expanding the DW/BI System |  |
| **Week 9**  May 26th | Administration / DW’s place in Enterprise Analytics | Slide deck |  |
| **Week 10**  June 2nd | Agile Approach to DW | Slide deck |  |
| **Week 10**  June 9th | Term Project  Final Exam |  | **Project Due**  **Final Exam** |