Syracuse University

College of Engineering and Computer Science

***CSE 581 – Introduction to Database Management Systems***Syllabus

**Instructor:** Li Wang

**E-Mail:** [LWang101@syr.edu](mailto:LWang101@syr.edu)

**Site:**SU Blackboard

**Grader Name:**

Hema Srinivas Kodati (Monday 10:00am-12:00pm @Zoom): grade last name A-F

Raj Shah (Tuesday & Thursday 1:30pm-2:15pm @CST3-204 printing area, near Windows lab CST3-116): grade last name G-M

Akshay (Wednesday 11:00am-1:00pm @CST3-224): grade last name N-Y

**Grader Email:** [Akshay@syr.edu](mailto:Akshay@syr.edu) [hskodati@syr.edu](mailto:hskodati@syr.edu) [rshah26@syr.edu](mailto:rshah26@syr.edu)

**Office Hours:** *Monday & Wednesday 3:00 pm – 3:45 pm*

**Office Location:** *CST 3-204*

**Credits:**

3 credit hours

**Audience:**

Graduate Engineering Management, Computer Science and Computer Engineering and some senior undergraduate students

**Materials Website:**

I’m posting all course related lectures, labs, project assignments, notes, announcement etc. to Syracuse University **Blackboard ( blackboard.syr.edu : your SU email userID & password)**.

**Course Scope:**

This course will cover foundational concepts of database systems and it’s components; physical organization of data; data models; relational databases; and SQL query processing. In particular, the course will address the Entity Relationship (ER); the Relational Data will be emphasized. Students will gain experience in designing, developing, and implementing relational database applications.

We will have individual projects related to building relational database & implementing tables, triggers, functions, stored procedures & views, etc.

The course’s main focus will be on practical applications of the database theory and will include real-world examples and problems from an enterprise environment.

**Pre-requisites:**

CSE 382 (Algorithms and Data Structures) or CIS 351 (Data Structures)

**Referential Books (not required):**

Murach's SQL Server 2012 for Developers (Training & Reference), ISBN-13: 978-1890774691

Philip J. Pratt, and Joseph J. Adamski, "Database Systems Management and Design" 3rd *Edtion*

Oracle PL/SQL Language (Pocket Reference), ISBN-13: 978-0-596-51404-4

Oracle PL/SQL Programming, ISBN-13: 978-0-596-00977-9

Oracle PL/SQL Best Practice, ISBN-13: 978-0-596-51410-5

**Attendance:**

You are expected to attend every class. *You will be responsible for any announcements, materials and changes to the assignments or schedule that are discussed in class, as well as submitting any work that is due. Any lab / assignment due that day are due at the* ***end of class***. Submit electronic version to Blackboard for every lab and project/homework assignment. Final exam is paperwork.

**Preview and review:**

Instructor is posting lectures and related SQL code examples before each lecture. Students are encouraged to preview and review these lectures for better learning efficiency.

**Grading:**

**Max 16 labs – 50% of the final grade** (provide the opportunity for you to try out concepts from lectures, with us in the room to assist if needed. Introduce AppsAnywhere at Windows labs)

**3 projects (homework) – 30% of the final grade** (Project1 10%, Project2 10%, Project3 10%. Provide the opportunity for you to put together the concepts from multiple lectures to solve problems of various scale. There will be a project/homework assignment approximately every three to five weeks.)

**1 final exam – 20% of the final grade** (Time: the last day class of current semester, not MySlice schedule. Location: generally, it is the same classroom of current semester. May bring an A4 size cheat sheet)

(Instructor reserves the right to adjust % of each part for entire final grades based on the completed load)

|  |
| --- |
| A 93.0-100%          C+  77.0-79.9% |
| A- 90.0-92.9%             C    73.0-76.9% |
| B+ 87.0-89.9%           C-   70.0-72.9% |
| B 83.0-86.9%            *D[[1]](#footnote-1)    60.0-69.9%* |
| B- 80.0-82.9% F     0.0-59.9% |

**Late Policy:**

Labs, projects/homework and final exam are not accepted late unless you submit an official written excuse; otherwise, it’s counted as 0.

**Labs & Tools:**

This course requires labs & projects/homework which reside on SQL server database.

Any Windows Labs in LINK Hall or Center of Science & Technology have SQL Server Management Studio installed: LINK 011, LINK 201, LINK 202, LINK 274, CST 3-116.

Your Windows laptop with Microsoft SQL Server Management Studio (free to download from MS website) installed are encouraged to be brought to every class.

If you have Mac operating system only or you have Windows but cannot install SQL Server Management Studio properly, please refer to “Remote\_Access\_MAC” or “Remote\_Access\_Off\_Campus\_Windows-10” for how to access LINK/CST Windows labs' desktop **remotely**; they are posted under “Content” in Blackboard. **PS: Please use server lcs-vc-ts-stu1.ad.syr.edu or lcs-vc-ts-stu2.ad.syr.edu (server lcs-vc-ts-stu.ad.syr.edu is discontinued). Once you are done with Remote Access, please “Log Off/Disconnect” from the “Start” window on the bottom left corner of your screen instead of "clicking the remote window's closing X".**

**If you have trouble to login to the remote servers, please email College of Engineering & Computer Science IT:  ecscit@syr.edu**

**After log into the virtual Windows lab desktop, open the browser Chrome and go to website** [**https://appsanywhere.syr.edu**](https://appsanywhere.syr.edu)**; log in with your campus ID and password (if not authorized, email** [**ecscit@syr.edu**](mailto:ecscit@syr.edu) **); choose “SQL Server Management Studio” to launch SSMS.**

**Academic Integrity in this class:**

Students are not allowed to use other’s account to do labs/projects. Students are not allowed to copy anything from anyone, including online resources, in any manner for lab/project assignments.

Under the policy, students found in violation are subject to grade sanctions determined by the course instructor and non-grade sanctions determined by the School or College where the course is offered as described in the Violation and Sanction Classification Rubric.

All students—are expected to exhibit academic integrity in all situations. As a member of this community, you should also be familiar with the University’s academic-integrity policy, which is available at http://academicintegrity.syr.edu.

The policy covers a broad range of academic integrity issues, including appropriate use of sources in course work, unauthorized collaboration on assignments and labs, and misrepresentation of authorship or identity. The presumptive penalty for a first instance of academic dishonesty by an undergraduate is the XF – course failure with a transcript notation indicating an academic integrity violation.

**Disabilities:**

Students who are in need of disability-related academic accommodations must register with the Office of Disability Services (ODS), 304 University Avenue, Room 309, 315-443-4498. Students with authorized disability-related accommodations should provide a current Accommodation Authorization Letter from ODS to the instructor and review those accommodations with the instructor. Accommodations are not provided retroactively; therefore, planning for accommodations as early as possible is necessary.

**Religious Observances:**

SU’s religious observances policy, found at <https://policies.syr.edu/policies/university-governance-ethics-integrity-and-legal-compliance/religious-observances-policy/>, recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holy days according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online notiﬁcation process is available through MySlice/Student Services/Enrollment/My Religious Observances from the ﬁrst day of class until the end of the second week of class.

**WEEKLY Schedule**

|  |  |  |
| --- | --- | --- |
| **Timeline** | **Topic** | **Assignments/Assessments** |
| Week 1 | Syllabus;  DBMS Introduction  DB Design | Survey  Lecture 1  Lecture 2 & Lab 1 |
| Week 2,3 | DB Design (Normalization)  Advanced DB Design  SQL Server | Lecture 2 & Lab 1 due  Lecture 3 & Lab 2    Lecture 4 & Lab 3 |
| Week 4 | Intro to SQL; Basic Selects  Expressions, Conditions, Operators; Clauses; Subqueries | Lecture 5,6,7,8,9  (Homework 1)  Lab 4 |
| Week 5 | System Objects & functions;  Datatypes | Lecture 10 & Lab 5  Lab 6 |
| Week 6 | Tables | Lecture 11  Lab 7 |
| Week 7 | Data Manipulation | Lecture 12  Lab 8 |
| Week 8 | Table Joins | Lecture 13  Lab 9  (Homework 2) |
| Week 9 | Views | Lecture 14  Lab 10 |
| Week 10 | Stored Procedures | Lecture 15  Lab 11 |
| Week 11 | Functions | Lecture 16  Lab 12 |
| Week 12 | Triggers | Lecture 17  Lab 13  (Homework 3) |
| Week 13 | Cursors and Loops | Lecture 18  Lab 14 |
| Week 14 | Error Handling | Lecture 19 & Lab 15 |
| Week 15 | Advanced Topics (optional)  Review for Final Exam | Lab 16 |
| Week 16 |  | Final Exam |

1. D cannot be earned by a graduate student. In that case, you get C- [↑](#footnote-ref-1)