

College of Engineering and Computer Science

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

***Project– 1***

***Entity – Relationship Diagram for a University Database***

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***DESCRIPTION OF DESIGN:***

The business problem at hand is the creation of a comprehensive database for a university to efficiently manage and store data related to students, employees, semesters, and courses. This database serves as the backbone for various university functions, including student administration, employee management, and course scheduling.

* Students: The database captures essential information about students, including identification details, personal information, contact details, and enrollment-related data. It tracks the student's status, type, major/minor, and level (undergraduate or graduate).
* Employees: Employee records are similar to student records, covering identification, personal, and contact information. However, the database also stores employee-specific data, such as annual salary, benefits details, and job-related information like job title, job type (faculty or staff), and pay range.
* Semesters: For academic planning and scheduling, the database stores data about semesters, including the name (Fall, Spring, etc.), year, and start and end dates.
* Courses: This portion of the database covers course details, such as course codes, titles, descriptions, credit hours, prerequisites, and scheduling information. It tracks course sections, instructors, class timings, classroom details, enrollments, and grades.

The database will facilitate various university functions, including student registration, employee management, academic planning, and course scheduling. It will enable administrators, faculty, and staff to efficiently access and manage data, improving overall university operations.

***ENTITY – RELATIONSHIP DIAGRAM:***

The Following is the ER-Diagram of the University Database.

A computer screen shot of a computer flow chart

Description automatically generated