

UNIVERSITY *of* MARYLAND

UNIVERSITY COLLEGE - *Asian Division*

IFSM 410 – Database Concepts

Credits: 3

Monday through Thursday 11:40 to 12:55, Iwakuni MCAS, Japan

Prerequisites: IFSM300 or equivalent and programming knowledge

Instructor: Assoc. Professor Robert Laurie

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Textbook: *Database Systems: Design, Implementations, and Management*, 4th Edition by Peter Rob, Carlos Coronel, Published by Thompson Learning, ISBN: 0-7600-1090-0

Description:

An introduction to the design and management of database systems in a business environment. Topics include the role of databases in organizations; the management of information as a critical business resource; types and functions of database management systems; conceptual data modeling and entity/relationship and semantic data models; and the fundamental principles of relational and object-oriented database design. The implementation and maintenance of database management systems and the role of the database administrator are discussed. Students may receive credit for only one of the following courses: CMIS 320 or IFSM 410.

Objectives:

1. Identify and discuss the basic concepts of relational database theory and the life cycle of a database
2. Create, update, and manipulate data and control access to a database using structured query language
3. Develop an entity-level working model of a relational database founded on multiple-user views and requirements using database design language and data-structure diagrams
4. Demonstrate the use of database design language and data-structure diagrams as tools for the design of table structures, attributes, and data validity
5. Identify and analyze current database trends, such as data mining and object-oriented databases, and their potential impact on future database applications

Grades:

The grade in the course will be based on 3 exams and several projects:

Items	Scores	Percent
Exam 1	100	20%
Exam 2	100	20%
Final Exam	150	30%
Projects	150	30%
Total	500	100%

Grade	Scores	Percent
A	500 to 450	100.0 to 90.0%
B	449 to 400	89.9 to 80.0%
C	399 to 350	79.9 to 70.0%
D	349 to 300	69.9 to 60.0%
F	< 300	Less then 60%

Exams:

Exams 1 and 2 will cover topics discussed in that portion of the class. The final exam will be comprehensive and cover topics discussed throughout the course. I encourage students to study together for exams and will not curve scores.

Only students with officially excused absences will be able to make up the exams, others will receive a grade of zero. You must contact me via email, for me to authorize a makeup exam time prior to the scheduled exam time. You need to provide me with documentation verifying the excused absence. Failure to comply with these requirements will result in a score of zero on the exam.

There will be no extra credit awarded in the course, so do your best on the given assignments.

Projects:

Project assignments of various point values will be given throughout the term. Completed project reports must be submitted on the due dates. Late assignments will be reduced 25% of the total point value for each class period late. No projects will be accepted after the final exam time. Microsoft Access 2000 will be used for all projects.

Grading will be 80% objective (results, explanations, conclusions) and 20% subjective (neatness, clarity, conciseness, extra work). A project report that minimally meets all specifications will receive a score of 80% of the total points. If any portion of a project is plagiarized, the entire project will receive a score of zero.

Attendance:

Class attendance is mandatory. If you miss a class meeting, it remains your responsibility to obtain information concerning the material covered and upcoming assignments. Excessive absences may result in your being assigned a grade of *F(n)*! *Failure due to non-attendance*.

This syllabus and schedule are subject to change at the discretion of the instructor. Announcements will be made in class concerning such changes. You are responsible for any announcements made in your absence.

Cell phones/pagers and similar devices are not allowed in the classroom unless a special need arises and the student receives approval from the instructor.

IFSM 410 Course Schedule (Tentative *)

Date:	Topics:	Read Before Class:
Week 1	File Systems and Databases The Relational Database Model	Chapter 1 Chapter 2
Week 2	Entity Relationship Diagram (ERD) Modeling	Chapter 4
Week 3	Normalization of Database Tables EXAM 1 – Last Class	Chapter 5
Week 4	Database Design Conceptual Design	Chapter 6 Chapter 7
Week 5	Logical Design and Implementation Client Server Systems	Chapter 8 Chapter 12
Week 6	Databases and the Internet EXAM 2 – Last Class	Chapter 14
Week 7	Structured Query Language Data Base Administration	Chapter 3 Chapter 15
Week 8	FINAL PROJECT PRESENTATIONS FINAL EXAM – Last Class	Study

* This syllabus is tentative and is subject to change.