

# Database Systems

Course URL: [www.cs.iusb.edu/~raman/db](http://www.cs.iusb.edu/~raman/db)

Computer & Information Sciences, Indiana University South Bend

Spring 2009 Course Syllabus

<b>Instructor</b> : Dr. Raman Adaikkalavan	CSCI C442 (Section : 4370)
Website : <a href="http://www.cs.iusb.edu/~raman">www.cs.iusb.edu/~raman</a>	INFO I451 (Section : 4374)
Office : North Side Hall 329	
Course Email : Message via <a href="mailto:oncourse.iu.edu">oncourse.iu.edu</a>	Lectures : W 5-7:40P
Office Hours : W 3-4.45 P or by appointment	Room : NS 0039

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## COURSE OBJECTIVE & OUTLINE

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The main objective of the course is to give students a thorough understanding of database management system (DBMS) fundamentals. The emphasis of this course is on the concepts underlying various functionalities supported by a DBMS and to gain sufficient understanding of a DBMS and its usage, from an end-user/application perspective. This course is divided into three modules. 1) Relational database modeling, 2) Relational database programming, and 3) Advanced topics. This course assumes the knowledge of UNIX basics.

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## TEXT BOOK & REFERENCES

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- **Text Book:** Fundamentals of Database Systems, 5/E by Elmasri and Navathe. ISBN: 0321369574
- **Reference:** Database Systems: The Complete Book, 2<sup>nd</sup> Ed. By Garcia-Molina, et al. ISBN: 0131873253
- **SQL Reference:** Oracle 10g Programming a Premier by Rajshekhar Sunderraman. ISBN: 0321463048

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## GRADING

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**Total Points (1000):** A+ (>999), A (>899), B+ (>869), B (>799), C+ (>769), C (>699), D+ (>669), D (>599), F (<600)

There will be quizzes (8%), three exams (42%), projects (32%), presentation (2%) and homework assignments (13%). Lowest announced quiz score will be dropped. Class attendance and participation are vital for active and effective learning and will constitute for 3% of the grade. This is an initial proposal, and instructor reserves the right to redistribute the percentages, if deemed necessary. The grading scale may be modified based on the class average.

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## ATTENDANCE & MAKE-UP

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There are **NO** make-ups after the scheduled time. If you miss a quiz or an exam with a VALID excuse (University excused absence (e.g., representing IUSB); or Proper documentation of an illness (for the entire period)), your Final Exam grade will count in place of that grade. Attendance is **required**. If you are unable to attend class, **you are responsible for completing the material covered**. Please keep me informed about any extenuating circumstances that may affect your attendance.

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## HOW TO DO WELL IN THIS COURSE

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Students who get the most out of this course will be the ones who put in the most effort. If you want to do well, **attend all the lectures**, read the assigned sections of the book/papers, and start early on your project/homework. Working out questions from book chapters will immensely help in doing well on quizzes/exams. If you are having difficulty, you owe it to yourself to get help. I will be more than happy to help you. Don't be afraid or feel shy to come and see me, as no question is a dumb question. If you cannot make it to office hours but really need help, contact me via email to setup appointment. I sincerely want all of you to do well. It is your responsibility to check the course website, and read **oncourse Emails/Announcements**. I would recommend you to utilize oncourse chat room effectively.

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## PROJECT

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Since the emphasis of this course is on understanding of a DBMS and its usage from an end-user/application perspective, there will be a semester long project that will have several parts. It will start with the identification of an application (instructor assigned), doing a requirements analysis, coming up with an ER/EER representation for the application, mapping the ER diagram to relations (or schema), normalizing them, populating the relations, and executing several types of queries (ad-hoc/embedded). The project will be done in stages and points accumulated over the entire semester. The final stage of the project will be to demonstrate the application at the end of the semester. For each phase, a project report should be submitted, and there may be a final project presentation. We will use the ORACLE database on mentor server for this project. For final stages you can use PHP and JDBC.

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## HOMework, PROJECT AND EXAM GUIDELINES

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- Students must work alone on all assignments unless otherwise specified. Your work *must* be your *own*.
- Due date will be specified in the handout. Submission date may be modified based on the progress made in the class.
- Late assignments can be submitted for credit with NO penalty, with a valid excuse. There will be a penalty of 10% for the first 24 hours. Between 24-48 hours, a penalty of 30% will apply. After 48 hours assignments will not be accepted.
- Students are allowed to take an automatic extension of 24 hours on three assignments without any penalty, by sending an email to the instructor. After 24 hours usual penalties apply.
- After the graded sheets are returned, students will have 10 business days to discuss any grading issues. For submissions during the end of the semester and final exam, check with the instructor.

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## ACADEMIC INTEGRITY

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“As a student you have a right to learn in an environment that provides for intellectual and ethical growth. This is also your responsibility and requires you to behave in an ethical manner. Therefore, your conduct must conform to the Indiana University Code of Student Rights, Responsibilities and Conduct (<http://www.iusb.edu/~judicial/>).”

- Students are encouraged to discuss assignments with other students in the class and other classes. However, the actual coding/assignment should be done individually.
- CHEATING, PLAGIARISM, or COLLUSION will NOT be tolerated.
- Sharing (even showing) your code/assignment with another student, even temporarily, is COLLUSION.
- Copying, even a part, of the code/assignment (e.g., from a tutor, from internet, another student in the same or different class, or from a previous semester) is PLAGIARISM.

Violation of ethics code will result in a grade of “0” for the applicable assignment, and further disciplinary action, including a failing grade for the entire course, possibility of dismissal from the University, may also be taken.

“Since dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced with zero tolerance.”

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## DISABILITIES

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“Any student who feels that an accommodation may be needed based on the impact of a disability should contact the Office of Disability Support Services (<http://www.iusb.edu/~sbdss/>) at 520-4832 in office AL 113 of the Administration Building. Staff will work to coordinate reasonable accommodations for students with documented disabilities. If you need any help from me please feel free to contact me during the first week. ”