

Instructor: Dr. Ching-yu (Austin) Huang

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Office Hours: Monday, Wednesday: 12:20–2:50 pm; Tue, Thurs: 12:20–1:50 pm

### Class Information:

- **Content:** Fundamental computing and programming concepts; use of systems software; problem solving; design of algorithms using a high-level, object-oriented programming language.
- **Prerequisites:** CPS 2232 and Math 2110. Students without prerequisite(s) must withdraw from the class.
- **This is a hands-on course. Students are required to bring personal laptop every class.**
- **Class: 03 section:** Tue, Thurs (2:00 - 3:15 pm), NAAB, 208. **04 section:** Tue, Thurs (11:00 - 12:15 pm), NAAB 208
- **Textbook:** Database Systems: A Practical Approach to Design, Implementation, and Management. Author: Thomas Connelly and Carolyn Begg, **6th edition**. Pearson, 2014. ISBN-13: 978-0132943260
- **Objectives:** Upon completion of this course, students will be able to:
  - A. Evaluate the role of databases in computing systems
  - B. Design and build applications using database management systems
  - C. Compare and evaluate diverse database models
  - D. Implement a consistent database
  - E. Understand transaction processing concepts
  - F. Understand relational algebra as a basis for database query languages
- **Course Grading:** 2 Quizzes (20%), 1 Midterm (25%), 1 Final Exam (25%), 2 Homework (10%), and 2 Projects (20%)  
A: 100-94, A-: 93-89, B+: 88-84, B: 83-80, B-: 79-76, C+: 75-72, C: 71-68, D: 67-64,  
below 64 is failing (a C or better is needed for CS and IT majors.)
- **Assignments:** Projects and homework assignments will use SQL connecting through **eve.kean.edu** (Linux system).
- **Mid-Term Progress** information will be provided to students by the instructor via KeanWise. Please see the 2018-2019 Undergraduate or Graduate Catalog for more information.

### Class Policies:

- No late work will be accepted without permission in advance from the instructor. Late work is penalized.
- No make-up exams are provided without documentation of medical or family emergency. Please arrange your schedule for the next 16 weeks to arrive in class on time and prepared.
- Attendance, participation and lab exercises are very important part of the final grade. Excused absences must be arranged in advance and evidence of the reason for the absence must be provided.
- All work turned in under your name must be your own. Programming assignments must be your own work. No credit will be given for an assignment or homework that is copied – in part or in total – from another person.

### Important University Policies and Information:

- The Kean Academic Calendar can be found online at <http://www.kean.edu/KU/Academic-Calendar>
- Tutoring and learning Support services: <http://www.kean.edu/content/tutoring-services>
- The Kean Academic Integrity Policy is online at <http://www.kean.edu/admin/uploads/pdf/AcademicIntegrityPolicy.pdf>. Students are expected to read and abide by the academic integrity guidelines.
- The Kean student code of conduct can be found online at <http://www.kean.edu/KU/Code-of-Conduct>. Students are expected to have read and abide by the code of conduct.
- The Kean Students Rights and Responsibilities handbook is available at <http://www.kean.edu/KU/Forms-Policies-and-Publications>. Students are expected to have read and to follow all regulations.
- All students should register for the university's emergency notification system at <http://www.mir3.com/kean>.
- All students must have a valid Kean email account. If you do not have one, you can request one at <http://www.kean.edu/offices/ocis/forms>; click on E-mail Account Request Form.
- **Title IX** of the Education Amendments of 1972 (Title IX) prohibit discrimination on the basis of sex in education programs or activities. Sexual harassment in any form will not be tolerated at Kean University. Sexual harassment by students should be reported to the Office of Affirmative Action Programs, Office of the Vice President for Student Affairs or the Office of Community Standards and Student Conduct immediately. Information about the University's Sexual Misconduct Policy may be found at the following: <http://www.kean.edu/policies/sexual-misconduct-policy>.
- **Americans with Disabilities Statement & Non-Discrimination Statement:**  
Kean University is an affirmative action, equal opportunity institution. Students with documented disabilities who may need special instructional accommodations or who may need special arrangements in the event of an evacuation should notify the instructor as soon as possible, no later than the second week of the term. Students may contact the Office of Disability Services in Downs Hall Room 122 or call 908-737-4910 to discuss special needs.
- **Kean University Non-Discrimination Policy Statement:**  
Kean University is an affirmative action, equal opportunity institution.

Week	Date		Topic	Reading	Assignment		
1	1/22/2019	Tue	Overview + Database Introduction, setup/test	Ch1	Test eve and MySQL accounts	1	
	1/24/2019	Thur	Web, DB, PHP & Linux exercises	Ch 2, PHP	Start Project #1	2	
2	1/29/2019	Tue	Basic SQL: Data Manipulation, view	Ch6, web	Start Homework #1	3	
	1/31/2019	Thur	Web and DBMS, PHP MySQL functions	PHP, MySQL		4	
3	2/5/2019	Tue	3-tier, CGI, Cookie, Authentication, PHP	Ch29		5	
	2/7/2019	Thur	SQL: DDL, CREATE, keys	Ch7		6	
4	2/12/2019	Tue	Quiz #1		Quiz #1	7	
	2/14/2019	Thur	Basic SQL: DML, subquery, joins	Ch6	HW #1, P#1 due 2/16	8	
5	2/19/2019	Tue	Basic SQL: DML, more joins	Ch6	Start Project #2	9	
	2/21/2019	Thur	Continue DDL, CREATE, ALTER	Ch7		10	
6	2/26/2019	Tue	Continue DDL, updatable view	Ch7		11	
	2/28/2019	Thur	XAMPP – Apache, MySQL: SQL - DCL	XAMPP		12	
7	3/5/2019	Tue	Review Midterm			13	
	3/7/2019	Thur	Midterm		Midterm	14	
8	3/12/2019	Tue	3/11-17 Spring break		School closed		
	3/14/2019	Thur	3/11-17 Spring break		School closed		
9	3/19/2019	Tue	Midterm #2 answers, project 2			15	
	3/21/2019	Thur	Relational Model & Algebra	Ch 4, 5		16	
10	3/26/2019	Tue	Advanced SQL, more joins	Ch8	Start Homework #2	17	
	3/28/2019	Thur	Web DB insert, update, errorno, PHP	PHP, MySQL		18	
11	4/2/2019	Tue	Advanced SQL: variables, stored procedures	Ch8		19	
	4/4/2019	Thur	Quiz #2		Quiz #2	20	
12	4/9/2019	Tue	Continue - stored procedures	Ch8		21	
	4/11/2019	Thur	Database System Development Lifecycle, Entity-Relationship Model	Ch10, Ch12	HW # 2 due by 4/13	22	
	4/12/2019	Fri	Last day to withdraw with 'W' grade		0% refund		
13	4/16/2019	Tue	Database Analysis & Case Study	Ch11		23	
	4/18/2019	Thur	Normalization, ERD to tables	Ch14	P #2 due by 4/20	24	
14	4/23/2019	Tue	Conceptual Database Design	Ch16		25	
	4/25/2019	Thur	Physical design, file, index, search	Ch18		26	
15	4/30/2019	Tue	Transaction management, XAMPP – backup project	Ch22, XAMPP		27	
	5/2/2019	Thur	Review for final	5/4: last day to submit all missing assignments with late penalty.		28	
16	5/7/2019	Tue	Monday schedule (no Tuesday class)				
	5/9/2019	Thur	Final exam		Final	29	
17	5/14/2019	Tue	Review final exam answers				30