

Instructor: Dr. Ching-yu (Austin) Huang

Website: <http://www.kean.edu/~chuang>Email: chuang@kean.eduOffice Hours: <https://huang.youcanbook.me/> Tuesday - Thursday: 9:30–10:30 am; 3:30 – 4:30 pmClass: **Monday, Wednesday (11:00 - 12:15 pm)**, **synchronized ONLINE** using Blackboard Live SessionPrerequisites: **CPS 2240 AND CPS 2110** Students without prerequisite(s) must withdraw from the class.

Unit		Date	Topic	Reading	Notes	#
	Mon	8/31/20	School starts on Sept 1			
1	Wed	9/2/20	Overview + Database Introduction	Ch 1	Test eve, DB account	1
	Mon	9/7/20	Labor Day		School closed	
	Wed	9/9/20	Web DB environment & Linux exercises, P 1	Ch 2, 29	Start P 1	2
2	Mon	9/14/20	Basic SQL: DML, basic SELECT, create View, HW 1	Ch 6	Start HW 1	3
	Wed	9/16/20	HTML, PHP, PHP array, P 1	Ch 29, PHP		4
3	Mon	9/21/20	Web DB Architectures & CGI, PHP, Quiz #1	Ch 3, 29	Quiz #1	5
	Wed	9/23/20	SELECT with aggregation, group by, HW 1	Ch 6		6
4	Mon	9/28/20	SELECT & web using PHP MySQL	PHP MySQL		7
	Wed	9/30/20	SQL simple join and conditions	Ch 6		8
5	Mon	10/5/20	Set & more joins - natural, outer	Ch 6		9
	Wed	10/7/20	Basic SQL: subquery, Quiz #2	Ch 6	Quiz #2	10
6	Mon	10/12/20	Authentication, cookies & login, PHP MySQL	Ch 29	HW 1 due	11
	Wed	10/14/20	Workbench, SQL DML: INSERT, UPDATE, DELETE	Ch 6	P 1 due	12
7	Mon	10/19/20	SQL create and alter table, P2	Ch 7	Start P 2	13
	Wed	10/21/20	SQL: DDL, create, alter tables with FK	Ch 7		14
8	Mon	10/26/20	Insert, delete, update & foreign keys, Quiz #3	Ch 7	Quiz #3	15
	Wed	10/28/20	View and updatable views	Ch 7	Start HW 2	16
9	Mon	11/2/20	HTML inputs, INSERT in PHP MySQL, P 2	PHP MySQL		17
	Wed	11/4/20	SQL Injection, PHP MYSQL error handling, XAMPP	PHP MySQL		18
10	Mon	11/9/20	Advanced SQL, variables, stored routines	Ch 8		19
	Wed	11/11/20	More stored routines, exercise, Quiz #4	Ch 8	Quiz #4	20
	Wed	11/11/20	Last day to withdraw with 'W' grade		0% refund	
11	Mon	11/16/20	Database design lifecycle, DB analysis - dreamhome	Ch 10, 11		21
	Wed	11/18/20	E-R model & diagram	Ch 12		22
12	Mon	11/23/20	Database design, forms to ERD & ERD to tables	Ch 17, 12		23
	Wed	11/25/20	Database design, , Quiz #5	Ch 16	Quiz #5	24
13	Mon	11/30/20	Anomalies, functional dependency, normalization	Ch 14		25
	Wed	12/2/20	Physical Design, HDD vs. SSD, indexing, RAID	Ch 18	P 2 & HW2 due	26
14	Mon	12/7/20	XAMPP, SQL DCL, database administration, backup	Ch 7		27
	Wed	12/9/20	Review for final, exercise on XAMPP		Monday schedule	28
15	Mon	12/14/20	Final exam		Final exam	29
	Wed	12/16/20	Review final exam answers		HW & PJ last date: 12/18	30

Late revision: 8/17/2020

- **Content:** Fundamental concepts and standards for database management systems; database design; database implementation; storage and performance considerations; application of database management systems
- **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. Understand the role of databases in information technology
 - B. Design and build applications using database management systems
 - C. Design database using various data models
 - D. Interact with database using structural query language
 - E. Build web-based database applications
- **Course grading:** 5 quizzes (5x60 pts), Final (200 pts), 2 Homework (2x75 pts), discussions (15x10 pts), 2 projects (100, 100 pts)

Class Policies:

- **This is a hands-on course. Students are required to bring personal laptop every class.**
- Instructional Methods: lecture with slides, student presentations, class discussions and exercises, and project creations.
- **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 (C or better is needed for CS and IT majors.)
- It is students' responsibilities to verify all the scores posted on **the class website** that is announced on the first day of the class.
- **Assignments should be used MySQL connecting through a Linux server that is announced on the first day of the class.**
- Mid-Term Progress information will be provided to students by the instructor via KeanWise.
- 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 and participation are required.
- All work turned in under your name must be your own. **No credit will be given for an assignment or homework that is copied – in part or in total – from another person.**
- **Exam policy:** During class examinations, if a student leaves the classroom for any reason during the exam time, **the exam must be turned in before the student departs, concluding the exam for that student.** The student cannot resume the exam on return later. You may not make or take a phone call, text or access the internet during class or a test.
- **Classes may not be audio or digitally captured**, unless permission has been granted by the instructor for that specific class.
- **Public posting of course materials from this class is prohibited.** Materials presented in the classroom are for the personal use of registered students during the semester only. Homework, programs, and other classwork should not be shared, distributed or publicized in any way, for the protection of other students and in respect of the intellectual property rights of the faculty and copyright owners.

Important University Policies and Information:

- The Kean Academic **Calendar** can be found online at <https://www.kean.edu/offices/registrars-office/academic-calendar>
- **Tutoring and learning Support services:** <http://www.kean.edu/content/tutoring-services>
- Students should review the **Student Code of Conduct**, as it discusses expectations of appropriate conduct in the classroom: <https://www.kean.edu/KU/Code-of-Conduct>
- Students are responsible to review and understand the University Academic Integrity Policy available via the following link: <https://www.kean.edu/academic-integrity>
- Read Kean **Students Rights and Responsibilities** at <https://www.kean.edu/offices/disability-services/rights-and-responsibilities>
- Register for the university's **emergency notification system** at <https://www.kean.edu/offices/university-police-0/campus-alert>
- Students must have a **valid Kean email account**. You can request one at <https://www.kean.edu/~ocisweb/forms.htm>
- **Title IX:** 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: <https://www.kean.edu/offices/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.

Syllabus Updates: **Instructor reserve the right to change the syllabus at any time throughout the semester.** All changes will be announced in class and a new syllabus will be electronically available to all students. If you are enrolled in this class past the add/drop date you are subjected to all rules in this syllabus.