

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 (4:30 - 7:15 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 | 1/18/21 | Martin Luther King Holiday | | School closed | |
| 1 | Mon | 1/25/21 | Overview + Database Introduction | Ch1 | Test eve, DB account | 1 |
| | | 1/27/21 | Basic SQL: DML, basic SELECT, create View, HW 1 | Ch 6 | HW 1 start | 2 |
| 2 | Mon | 2/1/21 | Web, DB, PHP & Linux exercises, Project | Ch 2, 29, PHP | Project start | 3 |
| | | 2/3/21 | SELECT, simple join, aggregation, group by, HW 1 | Ch 6 | | 4 |
| 3 | Mon | 2/8/21 | Web DB Architectures & CGI, PHP, Project | Ch 3, 29, PHP | | 5 |
| | | 2/10/21 | SQL: DML, set, subquery, combinations, HW 1 | Ch 6 | | 6 |
| 4 | Mon | 2/15/21 | SELECT & web using PHP MySQL, Project | PHP MySQL | | 7 |
| | | 2/17/21 | Continue PHP MySQL, review midterm 1 topics | PHP MySQL | | 8 |
| 5 | Mon | 2/22/21 | Midterm 1 | | Midterm 1 | 9 |
| | | 2/24/21 | More about subquery - HW 1 | Ch 6 | | 10 |
| 6 | Mon | 3/1/21 | SQL natural, outer join, aggregations | Ch 6 | | 11 |
| | | 3/3/21 | Authentication, cookies & login, PHP MySQL | Ch 29 | HW 1 due, HW 2 Start | 12 |
| 7 | Mon | 3/8/21 | Workbench, SQL DML: INSERT, UPDATE, DELETE | Ch 6 | | 13 |
| | | 3/10/21 | SQL: DDL, create table | Ch 7 | | 14 |
| 8 | Mon | 3/15/21 | Create foreign keys, Insert, delete, update & FK | Ch 7 | | 15 |
| | | 3/17/21 | CREATE view, updatable view, team research | Ch 7 | Team research start | 16 |
| 9 | Mon | 3/22/21 | HTML inputs, SQL injection, Project | PHP MySQL | | 17 |
| | | 3/24/21 | Midterm 2 | | Midterm 2 | 18 |
| 10 | Mon | 3/29/21 | INSERT in PHP MYSQL, error handling, XAMPP | PHP MySQL | | 19 |
| | | 3/31/21 | SQL variables, stored routines | Ch 8 | | 20 |
| 11 | Thur | 4/1/21 | Last day to withdraw with 'W' grade | | 0% refund | |
| | Mon | 4/5/21 | More stored routines, exercises, HW 2 | Ch 8 | | 21 |
| | | 4/7/21 | Database design lifecycle, DB analysis - dreamhome | Ch 10, 11 | Project due | 22 |
| 12 | Mon | 4/12/21 | E-R model & diagram | Ch 12 | | 23 |
| | | 4/14/21 | Database design, forms to ERD & ERD to tables | Ch 17, 12 | HW 2 due | 24 |
| 13 | Mon | 4/19/21 | Database design | Ch 16 | | 25 |
| | | 4/21/21 | Physical Design, HDD vs. SSD, indexing, RAID | Ch 18 | Team research due | 26 |
| 14 | Wed | 4/26/21 | XAMPP, SQL DCL, database administration, backup | Ch 7 | No more submission! | 27 |
| | | 4/28/21 | Review for final, exercise on XAMPP, review final | | Monday schedule | 28 |
| 15 | Mon | 5/3/21 | Final exam | | Final exam | 29 |
| | | 5/5/21 | Review final exam answers | | | 30 |

Late revision: 1/6/2021

- **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:** 2 Midterm (2x180 pts), Final (180 pts), team research (60 pts), 2 Homework (2x100 pts), 1 project (200 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:** >=940, **A-:** 939-890, **B+:** 889-840, **B:** 839-800, **B-:** 799-760, **C+:** 759-720, **C:** 719-680, **D:** 679-640, **F:** below 640 (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>
- **Academic Early Alert information** will be provided to students by the instructor via KeanWise. Please see the 2020-2021 Undergraduate or Graduate Catalog for more information
- **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.
- **Diversity & Non-Discrimination Statement:**
Kean University is committed to establishing and maintaining a diverse campus community through inclusive excellence and equal opportunity. Kean's commitment to access and equity is designed to prepare each graduate to not only thrive but climb higher in a diverse world. As an affirmative action, equal opportunity institution we work to support a campus-wide agenda to foster a community that both values and promotes the diversity and equity of all students, faculty, staff, administrators, and beyond. Kean adheres to the New Jersey State Policy Prohibiting Discrimination in the Workplace; for more information on Kean's non-discrimination policy and procedures, and protected categories under the policy, please visit: <https://www.kean.edu/offices/affirmative-action>.

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.