Database and Applications
CPSC 431-01
Spring 2021

Description & Objectives

Database design and application development techniques for a real-world system. System analysis, requirement specifications, conceptual modeling, logic design, physical design, and web interface development. Develop projects using contemporary database management system and web-based development platform.

Prerequisites

CPSC 332, declared major/minor in CPSC, CPEN, or CPEI.

Instructor

Mark Hauchwitz
Email: markhauchwitz@fullerton.edu
Office: Virtual (Zoom)
Office Hours: Mondays & Wednesdays, 6:45 – 7:15 PM (immediately after class); changes to this schedule will be announced in class; during final exam week, office hours are by appointment only.

Meeting Information

Room: Virtual
Time: Mondays, 5:30 PM – 6:45 PM & Wednesdays, 5:30 PM – 6:45 PM

Important Dates

CSUF's Academic Calendar is posted online at http://apps.fullerton.edu/AcademicCalendar. The Academic Calendar contains all the campus closures and holidays you should be aware of. CSUF's Admissions Calendar is posted online at http://www.fullerton.edu/admissions/Resources/Calendars.asp. The Admissions Calendar contains all the major dates with respect to adding, dropping, and withdrawing from your classes.

- January 25 - First class
- February 15 – No class (President's day)
- March 29 & 31 - Spring Recess - No class
- May 12 - Last class
- May 17 - Final Exam 5:00 PM - 6:50 PM

Textbook

Required

PHP and MySQL Web Development; Addison-Wesley Professional; 5th Edition, ISBN-13: 978-0321833891

Many popular technical books may be read online through the campus's subscription to Safari Online. From outside of the campus network, the campus library's WWW proxy will grant you access, http://www.library.fullerton.edu/asp/ipcheck.aspx?url=http://proquest.safaribooksonline.com/?uicode=calstate. The Safari Books Online service can be accessed directly from any computer campus network, http://proquest.safaribooksonline.com/.

Learning Goals

Students will learn the PHP fundamentals and lay the foundation for preparing themselves to become a professional PHP developer of enterprise web applications.

G.E. Requirements

This class does not meet any CSU General Education requirements.

Course Outline

Week and Dates	Topic	Textbook
1 (1/25 & 1/27)	• Introduction • Assessment test • Dynamic web applications using PHP, MySQL, HTML, CSS	-
2 (2/1 & 2/3)	• Using PHP • OO Design	Chapters 1-7
3 (2/8 & 2/10)		
4 (2/15 & 2/17)		
5 (2/22 & 2/24)	• Using MySQL	Chapters 8-11
6 (3/1 & 3/3)		
7 (3/8 & 3/10)	• Web Application Security	Chapters 14-16
8 (3/15 & 3/17)	• Advanced PHP	Chapters 17-19
9 (3/22 & 3/24)	• Advanced PHP	Chapters 20-22
10 (3/29 & 3/31)	NO CLASS – SPRING RECESS	
11 (4/5 & 4/7)	• JavaScript & PHP	Chapter 23
12 (4/12 & 4/14)		
13 (4/19 & 4/21)	• PROJECT INTERVIEWS	-
14 (4/26 & 4/28)	• Building Practical PHP and MySQL applications	Chapters 24-27
15 (5/3 & 5/5)		
16 (5/10 & 5/12)	Final preparation	All chapters & notes
17 (5/11)	Final examination	-

Technical Proficiency

Technical proficiency in programming and software engineering should correspond to the prerequisite(s) of the course. Students are expected to be intimately familiar with their development platform of choice and be able to write and debug code at a level of proficiency that corresponds to the prerequisites of the course.

Technical proficiency with information technology, such as, but not limited to, the use of web-based online services, sending and receiving electronic mail, and desktop computer file systems, is assumed.

Grading

Plus and minus grading is not used when determining final grades.

Final grades are computed by first finding the average score in each category described in the second table below. All scores are normalized to a scale of 0 to 100 before being averaged. The average score for each category is then used to compute the weighted average according to the weights in the second table below.

Grade	% of Total Points
A	90–100%
B	80–89%
C	70–79%
D	60–69%
F	Below 59%

Category	% of Final Grade
Assignments	40%
Final	25%
Project	25%
Participation	10%

Graduate Grading

Graduate students that use this course on a graduate study plan must perform additional work and will be evaluated on a separate grading scale vis-à-vis their undergraduate counterparts.

An additional programming project is mandatory for all graduate students. The project is proposed by the student and approved by the instructor. Graduate students must have a project approved by the

tenth week of the semester or face a penalty of −10% for each week it has not been approved similar to course rule. The final project is due on the last class meeting of the 14th week of instruction.

Plus and minus grading is not used when determining final grades.

Final grades are computed by first finding the average score in each category described in the table below on the right. All scores are normalized to a scale of 0 to 100 before being averaged. The average score for each category is then used to compute the weighted average according to the weights in the second table below.

Grade	% of Total Points
A	90–100%
B	80–89%
C	70–79%
D	60–69%
F	Below 59%

Category	% of Final Grade
Assignments	30%
Final Project	20%
Final	20%
Project	20%
Participation	10%

Assignments

Programming and written assignments will be discussed in class and posted to the course website in advance of their due dates. Each assignment description will include the assignment's grading rubric. Reading assignments are outlined in the syllabus and it is the responsibility of the student to stay up to date with the reading.

Written assignments must be typeset and presented in a professional manner. Presentation, spelling and grammar can be worth up to 30% of a written assignment's grade.

All programming assignments must be written in the PHP programming language, unless specified otherwise. Coding style must conform to professional norms. At a minimum, code must be commented, have descriptive names for identifiers, and contain a comment at the top of each file with pertinent information such as the student's name, email address, and assignment name. A plain text README.TXT must be included with each assignment submission summarizing and documenting the work submitted. For students unfamiliar with coding style, Google's style guides are an excellent starting point,

https://github.com/google/styleguide, particularly their C++ style guide, https://google.github.io/styleguide/cppguide.html.

At the start of the semester, the instructor will detail the platform and tools used to grade student assignments. It is the student's responsibility to ensure that the assignments execute to his or her satisfaction on the instructor's grading platform.

There are approximately:

- 3 programming assignments
- 14 weeks of reading assignments
- 1 project

Attendance Policy

Attending class is mandatory. Missing class is not allowed unless it is excused by the instructor. Missing class as part of a documented accommodation is guaranteed to be excused. The ADA accommodated student must make a reasonable effort to coordinate any absences with the instructor.

Make Up Policy

Exams and quizzes cannot be taken after they have been given in class. Due to an act of nature, personal medical emergency, a family crisis, an act of terrorism, severe civil unrest, etc. students have 10 calendar days to petition the instructor to retake any exam/quiz or submit an assignment without late penalty.

Exceptions shall be made on a case by case basis, provided there is time to evaluate the merits of such an application.

Participation

In the context of this course, participation is defined as the following:

- Arriving to class prepared and on time.
- Taking notes.
- Actively listening to the lecture and asking questions when appropriate.
- Annotating code listings and handouts.
- Bringing any required materials to class.
- When needed/desired, seeking assistance to complete assignments.
- Barring an emergency, not leaving the class session early unless the instructor consents.
- Not distracting oneself or others with smartphones, games, online diversions, etc.
- Respecting and treating the instructor and the student's peers civilly.

Required Material

- A writing instrument
- A notebook
- A USB memory stick
- A personal computer with the requisite development tools or regular access to a computer lab

Academic Dishonesty

Students are encouraged to assist one another and discuss the course materials with your peers. It is your responsibility to be aware of and follow the spirit of CSU Fullerton's academic honesty policy which can be found at http://www.fullerton.edu/senate/publications_policies_resolutions/ups/UPS%20300/UPS%20300.021.pdf. Academic dishonesty will not be tolerated. The University Catalog and the Class Schedule provide a detailed description of Academic Dishonesty under *University Regulations*.

By submitting work for evaluation, you acknowledge that you have adhered to the spirit of the university's academic honesty policy and that your submission is an original work by you unless otherwise directed to work in groups. Failure to follow the spirit of the academic honesty policy will result in a severely negative evaluation of the work in question and may result in involving the Department Chair and the Judicial Affairs office to seek a disciplinary remedy.

Students with Special Needs

Please inform the instructor during the first week of classes about any disability or special needs that you may have that may require specific arrangements related to attending class sessions, carrying out class assignments, or writing papers or examinations. According to California State University policy, students with disabilities must document their disabilities at the Disability Support Services (DSS) Office in order to be accommodated in their courses. Additional information can be found at http://www.fullerton.edu/DSS/, by calling 657-278-3112 or email dsservices@fullerton.edu.

Student Resources

Any student who wishes to discuss any concern may contact the assistant deans of the college. Assistant deans are student advocates who will help you navigate the university's policies and procedures and assist with resolving any conflict.

Assistant Dean for Student Affairs Carlos Santana
CS-206A (657) 278-4407 csantana@fullerton.edu
College International Advisor Anessa Escobar
CS-206A (657) 278-3813 anescobar@fullerton.edu

Emergency Procedures

For your own safety and the safety of others, each student is expected to read and understand the guidelines published at http://prepare.fullerton.edu/campuspreparedness/. Should an emergency occur, follow the instructions given to you by faculty, staff, and public safety officials. An emergency information recording is available by calling the Campus Operation and Emergency Closure line at 657-278-4444.

Instructional Continuity

Due to an event such as an epidemic or a natural disaster that disrupts normal campus operations, students must monitor the course Titanium site and their campus email address for any instructions and assignments that the instructor announces.

Laboratory Safety

Safety is no accident. Learning and following the appropriate safety practices and protocols is an integral part to all laboratory courses. Following the appropriate safety practices and protocols minimizes the chances of repetitive stress injuries, mishandling hazardous materials, and injury to self and others. Additional campus laboratory safety information regarding hazardous materials is online at http://riskmanagement.fullerton.edu/laboratorysafety/.

Extra Credit

Opportunities for extra credit will be announced on Moodle prior to the final examination date.

Recording & Transcription of Class Content

Recording class content is governed by UPS 330.230, http://www.fullerton.edu/senate/publications_policies_resolutions/ups/UPS%20300/UPS%20330.230.pdf. Each instructor must permit class content to be recorded or transcribed by students when mandated to do so by the Americans with Disabilities Act or by other federal or state laws. Any recording of class content is for private use and study and shall not be made publicly accessible without the written consent of the instructor and students in the class.

Course Rules & Classroom Management

Unless an agreement or accommodation is reached between the student and the instructor, these rules must be followed.

- Attendance at all regularly scheduled lecture and discussion sections is mandatory.
- Do not eat during lecture.
- If it makes noise, silence it.
- Computer use is not allowed in lecture except for taking notes.
- The student is responsible to be aware of any course announcements including changes to due dates and requirements.
- Homework, programming assignments, etc. may not be submitted late.
- Third party work (code, artwork, etc.) may not be used in student work without prior instructor consent. Failure to gain and document instructor consent will be construed as willful academic dishonesty.
- When a third party's work is incorporated into student work after gaining instructor consent, failure to wholly document the work's origin, copyright and license will be construed as willful academic dishonesty.