Introduction to CS147, Sec01

Kaushik Patra
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1

Instructor: Kaushik Patra

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Email: kaushik.patra@sjsu.edu

LinkedIn:

- SJSU Alumni from CMPE
- More than fifteen years in Electronic Design Automation (EDA) industry, currently working at Mentor, A Siemens Business.
- Worked for Texas Instruments, NeoMagic, SUN Microsystems, ORALCE, Synopsys.

Class Logistics

- Welcome to CS147, Section 01.
  - Tue / Thu @ DH 135, 6:00 pm – 7:15 pm.
  - Office hour @ DH282.
    - **Thu** 4:30 pm – 5:45pm (walk-in)
    - *Tue 4:30 pm – 5:45pm (**appointment only** – via email)*
- Most of the correspondence will be done using '**canvas**'.
  - http://www.sjsu.edu/at/ec/canvas/
- Class surveys and feedback are gathered through Qualtrics.
  - https://sjsu.qualtrics.com

3

- All the project submissions will be in electronic format (PDF and source code). No scanned copy of hand written solution will be accepted as valid submission.
- It is recommended to set the notification to email / text immediate.

Class Logistics

- 3 emails have been sent prior to this first meeting to **registered students**.
  - Welcome message via SJSU registration system.
  - Canvas notification setting suggestion via Canvas.
  - Prerequisite survey via Qualtrics.
- If you have not received them – please check and fix your email ID in canvas and / or in my.sjsu.edu.
  - Also send me an email.

4

Class Logistics

- Course prerequisite
  - CS 47 or CMPE 102 or equivalent with C- or better.
- Students **must complete pre-requisite survey** and upload **proof of eligibility** through **Qualtrics** survey.
  - Link will be send to your email to complete this survey.
  - A PDF copy of ***complete unofficial transcript*** clearly showing **student name**, **student ID** and **grade** in CS 47 / CMPE 102 to be uploaded.
  - Include academic standing (junior / senior / graduate). If senior, please attached a scanned copy of the senior card.
  - Students unable to send proof by 01/26 midnight will **not get** any add code or will be **dropped** from the class.

5

- It is assumed that the students already have basic knowledge of digital logic and fundamentals of assembly language machine programming.
- If you are not yet on Canvas and waiting to be added in the class, please send email to kaushik.patra@sjsu.edu.
- All student must submit their proof of eligibility into prerequisite survey.

Class Logistics

- Students waiting for add code must sent email tonight after the class to **kaushik.patra@sjsu.edu** with the following information.
  - ***Subject*** should be '**[CS147,01] Request for add code**'
  - **Email Body**
    - **Name**
    - **Student ID**
    - **SJSU registered email**
- An online form will be sent to you for your details – you must submit that form by **Jan 26, 2019, 11:59 pm**.
- If there are openings, add code will be given by **02/07/19** but not before **02/05/2019** (Last day to add **02/12/2019**).

6

Class Logistics

- If any student **misses any one meeting** within **first 3** meetings, that student will be **dropped** from the class.

- Each class session has lecture and hands-on.
  - Lecture will be live (with reservation of some exception)
  - Hands-on / Lab will be delivered as Video uploaded to canvas.

Class Logistics

- There will **4 quizzes**, **3 projects**.
  - Project carries **50%** towards final score.
  - Quiz carries **20%** towards final score.
- There will be one midterm and final exam.
  - Midterm carries **10%** towards final score.
  - Final carries **20%** towards final score

8

- Total of 3 score from projects will be contributed to your final score. Projects are individual (no group project).
- Total of 4 scores from quizzes will be contributed to your final score.
- Quizzes are virtually proctored using LockDown Browsers and Webcam recording.
- Submission is allowed till 11:59 pm on due date. Zero delay tolerance for the submission, i.e. NO late submission is permitted, unless you make special arrangements with your instructor beforehand.
- There will no makeups for missed mid-term or assignments, unless any special arrangement is made with the instructor beforehand.

Class Logistics

- Project reports are recommended to be submitted in IEEE format.
  - http://www.ieee.org/conferences_events/conferences/publishing/templates.html
- Project report should contain the following.
  - Introduction containing objective.
  - Requirement.
  - Design and Implementation.
  - Testing
  - Conclusion

9

- Include clear diagrams for requirement and design.
- Include code snippet to explain implementation.
- Include screen shots of testing waveforms and results.
- Upload HDL source code and test program as zip archive.
- ***10% of the obtained marks will be awarded as extra points in project evaluation if report submitted in proper IEEE format.***

Class Logistics

- You will receive a numeric score for the midterm, the final, each of the total homework, and each project submission. Letter grade, which is your class grade, will be obtained by adding the numeric scores and weighing with the percentages given below.

A+ = 100-97%	A = 96-93%	A- = 92-90%
B+ = 89-87%	B = 86-83%	B- = 82-80%
C+ = 79-77%	C = 76-73%	C- = 72-70%
D+ = 69-67%	D = 66-63%	D- = 62-60%
F = 59-0% Failure		

- Fraction in percentage will be converted into nearest integer value.
  - >= 0.5 will be moved to next integer number.
  - < 0.5 will be moved to previous integer number.

10

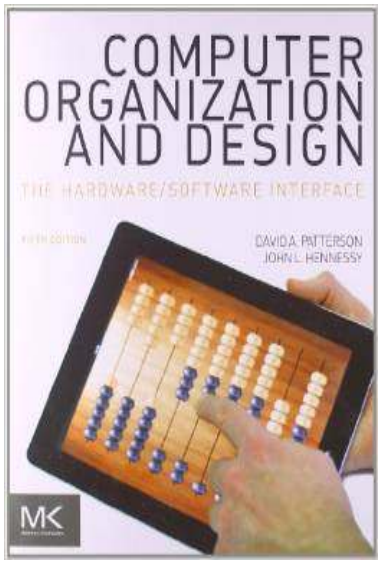
- 72.2% will be converted to 72%
- 72.4% will be converted to 72%
- 72.5% will be converted to 73%
- 72.8% will be converted to 73%

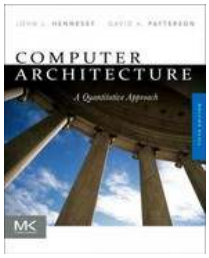
Class Logistics

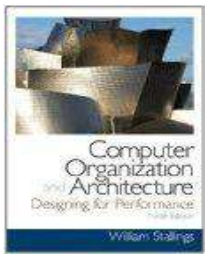
- **You must come to class on time!** Students entering the classroom late disrupt the lecture and / or the students already in class who may be engaged in lab or discussion.
- If you miss a lecture **you are still responsible** for any material discussed or assignments given. A large portion of each class will be used for hands-on lab / discussion. All students are expected to participate in class activities. Students who are often absent will find themselves at a disadvantage during the tests.
- It is individual **student responsibility** to **check validity** of their homework, assignment, project, submission (format error, blank files, corrupted files, and many more such) and re-submit within deadline if needed. Once the grading is started there will be no consideration for resubmit. ***If the submission found to have any logistics issue at grading time (format error, blank files, corrupted files, and many more such) it will be evaluated as 0***.
- **No audio / video recording** or photography in the classroom without prior permission of instructor.
- **No personal discussion or cell phone activity** during class time. Please set the cell phone on **silent/vibrate** mode.
- All e-mail communication to the instructor must have the ***subject*** line start with **[CS147,01]**
- Email to be sent to the instructor's **SJSU email ID** only.
- ***Lecture Notes are in Canvas – review it before coming to class.***

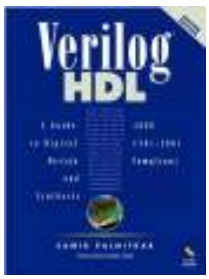
CS147 Books

- Reference books.









12

1. Computer Organization and Design | Edition: 5
Author: David A. Patterson
ISBN:9780124077263
Publication Date:10/10/2013
Publisher:Elsevier Science

2. COMPUTER ARCHITECTURE | Edition: 5TH 12
Author: HENNESSY
ISBN: 9780123838728
Publication Date: 09/29/2011
Publisher: ELSEVIER

3. COMPUTER ORGANIZATION+ARCHITECTURE | Edition: 9TH 13
Author: STALLINGS
ISBN: 9780132936330
Publication Date: 03/15/2012
Publisher: PEARSON

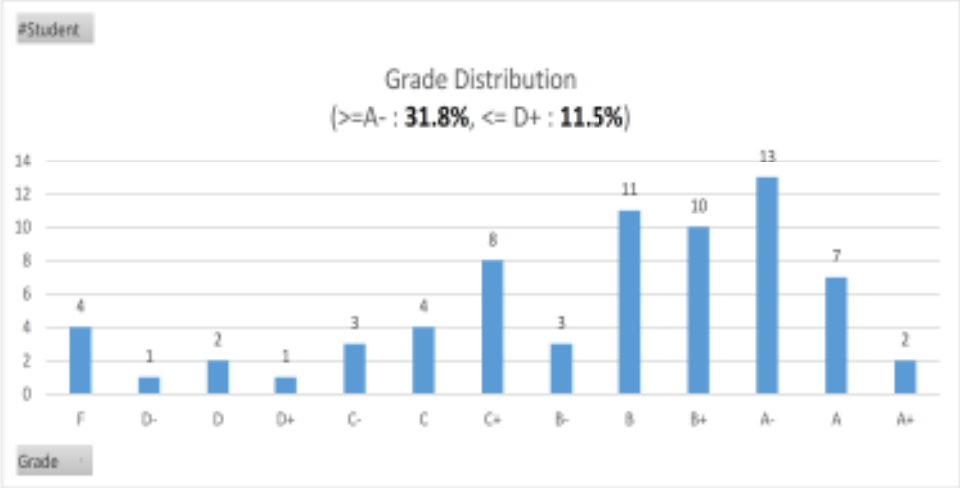
4. VERILOG HDL-W/CD | Edition: 2ND 03
Author: PALNITKAR
ISBN: 9780130449115
Publication Date: 03/10/2003
Publisher: PEARSON

5. LOGIC & COMPUTER DESIGN FUNDAMENTALS
Author: MANO & KIME
ISBN: 9780131989269
Publication Date: 06/15/2007
Publisher: PEARSON

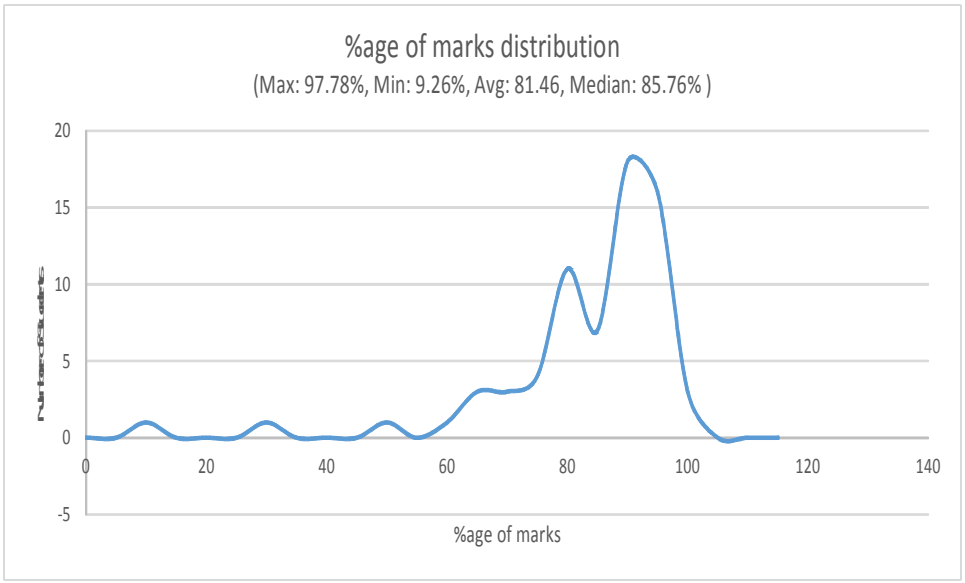
CS147 Challenges

- It is not an easy subject, it includes
  - Maths / Boolean Algebra
  - Drawing skills for logic schematic
  - Learning a language for describing hardware.
- Practice, practice, … and practice
  - Schematic / logic diagram drawing
  - Maths and Boolean algebra – at least example shown in the class.
  - Exam is all about brain to hand coordination.
- 4x study time rule – need to spend 10hr. / week at least outside class hour.

CS147 Latest Semester Score



CS147 Latest Semester Score



Email Protocol

- Email protocol to be maintained.
  - Subject line should start with '**[CS147,01]**'
  - Proper salutation should be present
    - 'hi' or 'hey' is **NOT** accepted.
    - No first name basis communication.
    - '**Good morning Mr. Patra**' is a better salutation.
    - Email language should be **professional** – remember that you are not sending email to your friend.
  - Emails are responded within 24 hour if properly composed.

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