

Course: **Computer Organization and Architecture (Ex/ET/PC/B/T/315/2023)**
Instructor: Ananda S. Chowdhury (ASC)
Office Room: T-5A-2
E-mails: as.chowdhury@jadavpuruniversity.in, ananda.chowdhury@gmail.com

Class Schedule:

Wednesday: 10 AM – 12 Noon and Thursday: 10 AM – 11 AM

Class Room: T-3-7

Office Hours:

Thursday: 2:00 – 3:00 (tentative) + through appointment (if necessary)

Books:

- 1. *Computer Organization and Design* by D. A. Patterson and J. L. Hennesey, Morgan-Kaufmann/Elsevier, 6th Edition**
(<http://booksite.elsevier.com/9780124077263/appendices.php>)
2. Computer Architecture: A Quantitative Approach by J. L. Hennesey and D. A. Patterson, Morgan-Kaufmann/Elsevier
3. Computer Architecture and Organization by J.P. Hayes, McGraw Hill
4. Computer Organization by C. Hamacher, Z. Vranesic and S. Zaky, McGraw Hill
5. Computer System Architecture by M.M. Mano, Prentice Hall

Topics with time frames (tentative):

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| 1. Basics – Abstractions and Technology | (0.5 week) |
| 2. Amdahl's Law and CPU Performance Equation | (1.5 week) |
| 3. Computer Instructions | (2 weeks) |
| 4. Computer Arithmetic | (2 weeks) |
| 5. Processor Design | (2 weeks) |
| 6. Memory Hierarchy | (2 weeks) |
| 7. I/O design | (1 week) |
| 8. Introductory Parallel Processing | (1 week) |

Grading Policy:

Two mid-terms (15% each)
One final (70%)