CS 101
Computer Programming and Utilization

Overview

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Welcome

- CS-101: Computer Programming and Utilization (CPU), Autumn 2023
  https://www.cse.iitb.ac.in/~cs101/
- Team
  - Instructor
    - Suyash P. Awate (suyash@cse.iitb.ac.in)
  - Course Managers
    - Firuza Karmali (firuza@cse.iitb.ac.in)
    - Nagesh Karmali (nags@cse.iitb.ac.in)
  - Teaching Assistants (TAs)
    - Many undergraduate students (from CSE and other departments)
    - Many postgraduate students (MTech and PhD, from CSE department)
  - Students
    - First-year BTech students across several branches

Course Structure

- Number of credits for CS-101 is 6
  - Number of credits associated with lecture-based instruction: 4
    - Weekly instruction: 2^- hours (2 slots of 55 minutes each)
      e.g., a 6-credit theory course can have 3 morning slots of 55 minutes each
  - Number of credits associated with laboratory-based instruction: 2
    - Weekly instruction: 2 hours (1 slot)
      e.g., a 3-credit laboratory course can have 3 morning slots of 55 minutes each

Schedule

- Lectures and labs
  - Section D4 lecture: Tue + Fri, 2:05 pm – 3:00 pm, LA 202
  - Section D4 laboratory: Tue, 8:30 pm – 10:30 pm (New-CSE Building)
  - Section D3 lecture: Wed + Fri, 11:05 am – 12 noon, LA 202
  - Section D3 laboratory: Wed, 8:30 pm – 10:30 pm (New-CSE Building)
- Help sessions **(optional)**
  - By teaching assistants: (New-CSE Building)
  - By course managers: (New-CSE Building)
  - Instructor office hours: immediately after lecture, or by appointment
- Evaluation
  - 2 Quizzes (lecture), during morning slot, Wed/Fri, 8:30 am – 9:25 am
  - 2 Quizzes (lab), during lab-quiz week, Mon+Tue+Thu+Fri 8:30-10:30 pm
  - 1 mid-semester exam, 1 end-semester exam

Grading

- Weekly lab sessions: roughly 10%
  - Practice programming with TA help, can work on your laptops or lab computer
  - List of problems released regularly; submit at least first 2 programs in each list
  - Grading: attendance + self-certification by students + quick perusal by TA
- 2 lab quizzes (1.5 hours each): roughly 25%
- 2 pen-and-paper quizzes (55 minutes each): roughly 25%
- 1 mid-semester exam (2 hours): roughly 20%
- 1 end-semester exam (2 hours): roughly 20%
- Syllabus for all quizzes and exams: everything from day 1
- "roughly" means that up to 5% deviation can occur in each of the above categories, i.e., 20% weightage becomes 25% or vice versa

Course Management

- Moodle https://moodle.iitb.ac.in
  - https://moodle.iitb.ac.in/course/view.php?id=2276 (D3 + D4 combined)
  - Download lecture slides; lab-practice problems present within lecture slides
  - Upload code you write in practice lab sessions
  - Get grades for quizzes and exams, including feedback from graders/TAs
  - Get announcements (automatically forwarded to your-roll-no@iitb.ac.in)
    - Must check email regularly; no excuses
  - Get logistics-related information: seating arrangement for labs, quizzes, etc.
  - Discussion forum: only place to discuss technical stuff
    - No individual emails to TAs, course managers, instructor, unless confidential/emergency
- Bodhitree
  - https://cs101.bodhi.cse.iitb.ac.in
  - Code in lab quizzes should be uploaded here

Teaching Assistants (TAs)

- Each TA assigned to a small group of students

- What to expect from TAs ?
  - Handling students' queries about technical content in lectures and labs
    - **Best place to resolve queries from TAs is during weekly lab itself**
  - Help with practice programming problems in during weekly labs
  - Attendance checking and grading for weekly labs
  - Invigilation and grading for lab-based quizzes, lecture-based quizzes+exams
  - Help session weekly
    - **Attendance is optional**
    - Few TAs will be present
    - Typically on a Sat in Software Lab 3;
      course managers will conduct a poll to get suitable timings

Course Managers

- What to expect from course managers ?
  - Handling mapping between a TA and a student group
    https://www.cse.iitb.ac.in/~cs101/
  - Managing teaching assistants
    - Main point of contact for all TAs in the course
    - Tracking TA attendance
  - Handling students' queries about technical content in lectures and labs
    - **Best place to resolve queries from course managers is during weekly lab itself**
  - Help session weekly
    - **Attendance is optional**
    - Typically on a Sat in Software Lab 3;
      course managers will conduct a poll to get suitable timings
  - Handling discussion forum on moodle

Instructor

- Lectures are main point of contact with instructor
  - Ask queries/doubts **during lecture and right after lecture**, in class
  - **Best place to resolve queries from instructor is during the class**
- Weekly labs
  - TAs are main point of contact
  - Course managers will be present
  - Instructor will be available briefly
- Quizzes (lab-based and theory-based) and exams
  - Instructor available, but avoid asking for clarifications
- Office hours for one-on-one discussion: right after lecture
- Moodle discussion forum
- Email instructor for personal or confidential issues, or in an emergency

Schedule

- August

Monday	Tuesday	Wednesday	Thursday	Friday
	1	2	3	4
7	8 D4 Lec D4 Lab	9 D3 Lec D3 Lab	10	11 D3 Lec D4 Lec (1.5x)
14	15 Holiday D4 Lab, optional	16 D3 Lec D3 Lab	17	18 D3 Lec D4 Lec (1.5x)
21	22 D4 Lec D4 Lab	23 D3 Lec D3 Lab	24	25 D3 Lec D4 Lec
28	29 D4 Lec D4 Lab	30 D3 Lec Theory Quiz 1 D3 Lab	31	

Schedule

- September

Monday	Tuesday	Wednesday	Thursday	Friday
				1 D3 Lec / D4 Lec
4	5 D4 Lec / D4 Lab	6 D3 Lec / D3 Lab	7	8 D3 Lec / D4 Lec
11 Lab Quiz 1	12 D4 Lec / Lab Quiz 1	13 D3 Lec	14 Lab Quiz 1	15 D3 Lec / D4 Lec / Lab Quiz 1
18	19	20	21	22
Mid-Semester Exam				
25	26 D4 Lec / D4 Lab	27 D3 Lec / D3 Lab	28	29 D3 Lec / D4 Lec

Schedule

- October

Monday	Tuesday	Wednesday	Thursday	Friday
2	3 D4 Lec D4 Lab	4　D3 Lec D3 Lab	5	6　D3 Lec D4 Lec
9	10 D4 Lec D4 Lab	11　D3 Lec D3 Lab	12	13　D3 Lec D4 Lec
16	17 D4 Lec D4 Lab	18　D3 Lec Theory Quiz 2 D3 Lab	19	20　D3 Lec D4 Lec
23	24　Holiday D4 Lab, optional	25　~~D3 Lec~~ D3 Lab	26	27　D3 Lec D4 Lec
30	31 D4 Lec D4 Lab			

Schedule

- November

Monday	Tuesday	Wednesday	Thursday	Friday
		1 D3 Lec D3 Lab	2	3 D3 Lec D4 Lec
6 **Lab Quiz 2**	7 D4 Lec **Lab Quiz 2**	8 D3 Lec	9 **Lab Quiz 2**	10 D3 Lec D4 Lec **Lab Quiz 2**
13	14	15	16	17
		End-Semester Exam		
20	21	22	23	24
		End-Semester Exam		
27	28	29	30	

Student Survey

- We'd like to
  know more about you,
  to help us help you better

- Please fill this survey asap:
  bit.ly/a23-cs101-survey

Plagiarism

Plagiarism

- Plagiarism policy
  - https://www.iitb.ac.in/newacadhome/rules.jsp
  - https://www.iitb.ac.in/newacadhome/academicMalpractices.jsp
  - Institute policy www.iitb.ac.in/newacadhome/punishments201521July.pdf
    - "A student found copying in an assignment/laboratory project is given a zero in the assignment/project and is further given a one grade penalty."
    - "The same disciplinary action is taken against both the person copying and the person from whom the material was copied."

- CSE policy
  - Teaching assistant or instructor will report case to Departmental Academic Disciplinary Action Committee (DADAC)
  - At least loss of 1 grade level
    - Can get a fail grade

Plagiarism in the Context of Programming

- What plagiarism means in the context of programming
  - https://integrity.mit.edu/handbook/writing-code
  - "…, during the time that you are helping another student, your own solution should not be visible, either to you or to them. Make a habit of closing your laptop while you're helping."
  - "As they type lines of code, they speak the code aloud to the other person, to make sure both people have the right code. INAPPROPRIATE."
  - "In a tricky part of the problem set, Alyssa and Ben look at each other's screens and compare them so that they can get their code right. INAPPROPRIATE."

Plagiarism in the Context of Programming

- What plagiarism means in the context of programming
  - https://integrity.mit.edu/handbook/writing-code
  - "Jerry opens his own laptop, finds his solution to the problem set, and refers to it while he's helping Ben correct his code. INAPPROPRIATE."
  - "Ben has by now spent a couple hours with Louis, and Louis still needs help, but Ben really needs to get back to his own work. He puts his code in a Dropbox and shares it with Louis, after Louis promises only to look at it when he really has to. INAPPROPRIATE."
  - "They exchange their test cases with each other to check their work. INAPPROPRIATE. Test cases are part of the material for the problem set, and part of the learning experience of the course. You are copying if you use somebody else's test cases, even if temporarily."

Attendance

- Attendance policy
  - https://www.iitb.ac.in/newacadhome/rules.jsp
  - https://www.iitb.ac.in/newacadhome/rulesUG.jsp
  - https://www.iitb.ac.in/newacadhome/ugrulebook.pdf
    - "IIT Bombay expects one hundred percent attendance (100%) from its students in all classes."
    - If the attendance of the student, as counted with effect from the first contact hour, falls below eighty percent of the total attendance expected, the 'DX' grade will be awarded in that course.
      - Only exception to this rule are courses where the instructor has declared that no DX grade will be awarded.
    - Medical certificate (pink slip) required from IITB hospital, or one duly authenticated by IITB Hospital.