Introduction to Computer Programming (ICP) Lecture 1: Introduction

by Goutam Paul

About the Instructor

- Dr. Goutam Paul
- Current affiliation: Associate Professor, Indian Statistical Institute
- Past affiliation: Jadavpur University, India
 RWTH Aachen University, Germany
 State University of New York at Albany, U.S.A.
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About the Teaching Assistants

Bhumika Mittal, 2nd year CS & Entrepreneurship Major Email: bhumika.mittal_ug24@ashoka.edu.in

Vaibhav Maurya, 3nd year CS Major Email: vaibhav.maurya_ug23@ashoka.edu.in

Gautam Ahuja, 2nd year CS Major

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Course Logistics

• Two lectures per week:

Tue, Thu 11:50 AM to 1:20 PM

• Instructor's office hours:

Tue, Thu 1:20 to 2:20 PM

- TA's office hours:
 - Bhumika -- Mon, 12:00 to 1:00 PM, AC04 7th floor, meeting room 2
 - Vaibhab -- Tue, 8:00 to 9:00 PM, AC04 7th floor, meeting room 2
 - Gautam -- Mon, 6:00 to 7:00 PM, AC04 7th floor, meeting room 2

Course Rules

- Mobile phones must be silent in class
- Copying or plagiarism will result in an F

Grading Policy

Total marks: 200. It will be distributed over the following:

- Class participation: 20
- Assignments (best 5 out of 6): 5x10 = 50
- Midterm: 50

80

• Final Semester:

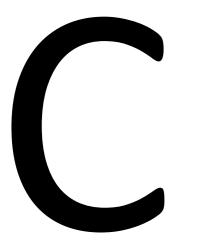
Course Objective / Goal

- Learn basics of programming
- Understand how computer system works
- Build small applications

Resources

- 1. Classroom Teaching
- 2. Lecture Slides
- *3. Lecture Handouts*
- 4. Links to reference tutorials and materials
- 5. The C Programming Language by Brian Kernighan and Dennis Ritchie

Course Content



Why C?

- It is the language of editors, interpreters and compilers
 Sun/Oracle JVM is written in C/C++
- It is the language of operating systems
 Windows, Android OS etc. are all built in C
- It is the language of hardware interfaces, device drivers, embedded systems

□Modern cars, metro rail, industrial control systems etc.

 It is the language of real-time and mission-critical applications
 NASA's Mars Rover's logic was written in approx. 3 million lines of C codes on a RAD750 processor

Materials for Self-Study

• <u>Why should every programmer learn C?</u>

by Dmitry Guzeev

<u>https://medium.com/@</u>

wrongway4you/why-should-every-programmer-learn-c-ff490ad984bf