

# 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.
- Website:    <http://www.isical.ac.in/~goutam.paul>  
                  <http://www.goutampaul.com>
- Email:       [goutam.paul@ashoka.edu.in](mailto:goutam.paul@ashoka.edu.in)

# About the Teaching Assistants

Bhumika Mittal, 2<sup>nd</sup> year CS & Entrepreneurship Major

Email: `bhumika.mittal_ug24@ashoka.edu.in`

Vaibhav Maurya, 3<sup>rd</sup> year CS Major

Email: `vaibhav.maurya_ug23@ashoka.edu.in`

Gautam Ahuja, 2<sup>nd</sup> year CS Major

Email: `gautam.ahuja_ug24@ashoka.edu.in`

# 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):  $5 \times 10 = 50$
- Midterm: 50
- Final Semester: 80

# 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

C

# 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

- [Why should every programmer learn C?](#)

by Dmitry Guzeev

[https://medium.com/@  
wrongway4you/why-should-every-programmer-learn-c-ff490ad984bf](https://medium.com/@wrongway4you/why-should-every-programmer-learn-c-ff490ad984bf)