CS101C: Computer Programming
Nikhil Hegde
Achyut Mani tripathi

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Course Overview

భారతీయ తంత్రజ్ఞాన సంస్థ ధారవాడ
भारतीय प्रौद्योगिकी संस्थान धारवाड
INDIAN INSTITUTE OF TECHNOLOGY DHARWAD

IIT DHARWAD

CS101C: Computer Programming

- Description:

This course provides an introduction to problem solving with computers using 'C' as a programming language.

- Credit structure (L-T-P-C) : 3-0-3-9

3 contact hours (three 50min lectures) per week. 6 credits.

3 lab hours (150 mins in total) per week. 3 credits.

Full-semester (14 week + 2 exam week) core course.

- Prerequisites: None

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- Assessment Plan - Theory (2/3rd weight)
  - Two paper based exams: Midsem and Endsem
  - Weightage: Midsem = 40 points, Endsem=60 points

- Assessment Plan - Lab (1/3rd weight)
  - Lab 1 - Practice (Development environment)
  - Labs (even week) = practice. Except the last week (8 points test).
  - Labs (odd week) = Tests. One 12 point test, Five 16 points tests
  - Venue: CIF 401 and CIF 402
- Grades:

If your numerical score is at least:	Your course grade will be at least:
90	AA
80	AB
70	BB
60	BC
50	CC
45	CD
40	DD

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- Teaching assistants and their role
  - Bonthu Vyuhita, Kumud Singh, Yogesh Kumar, Mridul Chandravamshi. Additionally: 22 TAs for labs.
  - Outside the class, the TAs are your first point of contact regarding doubts. You can **write an email** or **post in the Google classroom**. If writing an email:
    - Mention the TA email ID in 'to'.
    - Mention the instructor(s) (Prof. Achyut and/or myself) email ID in CC.
    - Mention "CS101 doubt" in the subject line
    - Mention the issue in the body.
    - Do not worry about grammar, etc.
    - DO NOT write an email only to instructors unless otherwise required (considering a large class, most likely the email will be missed)

Course Takeaways

- Write code (essential in creating a piece of software)
- Get to know *one* of the programming languages
  - An old language and still widely used if you want your software to 'perform' best
- Get to know features common to any programming language

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- Developer essentials
  - Editors, Integrated Development Environment (IDE), Unix Shell, Library-based development, Compiler toolchain
- Programming in C
  - Machine representation, data types and control flow, operators, arrays and strings, functions and recursion, pointers and structures, Input and output using files
- Applications: Sample problems in engineering, science, text processing, and numerical methods.

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- References and Texts:

  1. **The C Programming Language,** Brian W Kernighan, Dennis M Ritchie, Prentice Hall India , 2nd edition, 1988
  2. **Programming with C (Second Edition)** Byron Gottfried, Schaum's Outlines Series, Tata-Mcgraw Hill, 2011
  3. **How to Solve It by Computer,** by G. Dromey, Prentice- Hall, Inc., Upper Saddle River, NJ, 1982.
  4. **How to Solve _It (2nd ed.),** by Polya, G., Doubleday and co, 1957.
  5. **Let Us C**, by Yashwant Kanetkar, Allied Publishers, 1998.
  6. **Programming in ANSI C,** by E. Balaguruswamy

There are a number of copies of 1, 5, and 6 in the library.
Class slides and notes (if any) will be posted at:
https://hegden.github.io/cs101