

# CODESHOWS MODULE 1 (For First Year)

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## TUTORIAL FOR C:

- C Basic Syntax:-
  - <https://www.studytonight.com/c/c-syntax.php>
  - <https://www.youtube.com/watch?v=3cMs1SXAhgM>
- C Switch Statement:-
  - <https://www.studytonight.com/c/switch-statement-in-c.php>
  - [https://www.youtube.com/watch?v=OtG5oFp\\_UeQ](https://www.youtube.com/watch?v=OtG5oFp_UeQ)
- Loops in C:-
  - <https://www.studytonight.com/c/loops-in-c.php>
  - <https://www.youtube.com/watch?v=RMKp7Qr7tZA>
  - [https://www.youtube.com/watch?v=es\\_z0bM5pO0](https://www.youtube.com/watch?v=es_z0bM5pO0)
  - <https://www.youtube.com/watch?v=uGHWWJ1wHol>
- Arrays in C:-
  - <https://www.studytonight.com/c/arrays-in-c.php>
  - [https://www.youtube.com/watch?v=LVS4S\\_0Fy6Y](https://www.youtube.com/watch?v=LVS4S_0Fy6Y)
- Datatypes in C:-
  - <https://www.studytonight.com/c/datatype-in-c.php/>
  - <https://www.youtube.com/watch?v=SKqVQO0ab8s>

First year students are encouraged to complete the following course: (free)

<https://www.edx.org/course/cs50s-introduction-to-computer-science>

Extracts from cs50:

- Why C?
  - <https://www.youtube.com/watch?v=xCOj6vTqMxU>
- C basics
  - <https://www.youtube.com/watch?v=wEdvGqxafq8>
- Arrays
  - <https://www.youtube.com/watch?v=u-kH-5JJSgU>

**Optional:** Brainteasers (to be attempted after you are comfortable with the above concepts. You might need to solve a few sample problems before you attempt these):

(for submission and evaluation, you will have to work on cs50 ide and login to edx)

- Caesar: <https://docs.cs50.net/problems/caesar/caesar.html>

- Game of fifteen: <https://cdn.cs50.net/2016/x/psets/3/pset3/pset3.html>

**TOPICS FOR BASIC MATHS:**

- AP
- GP
- Probability
- Permutations and Combinations
- Statistics