DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR 2023-2024

TUTORIALS

A **tutorial**, in education, is a method of transferring knowledge and may be used as a part of a learning process. More interactive and specific than a book or a lecture, a tutorial seeks to teach by example and supply the information to complete a certain task.

Tutorials are often not optional because they give you an opportunity to delve deeper into concepts, and attendance may contribute to your participation mark

The tutorial system is a **method of university education** where the main teaching method is regular, very small group sessions. These are the core teaching sessions of a degree, and are supplemented by lectures, practical and larger group classes.

A tutorial can be taken in many forms, ranging from a set of instructions to complete a task to an interactive problem solving session (usually in academia).

In documentation and instructional design, tutorials are teaching-level documents that help the learner progress in skill and confidence. Tutorials can take the form of a screen recording (screencast), a written document (either online or downloadable), interactive tutorial, or an audio file, where a person will give step by step instructions on how to do something.

Advantages, Disadvantages and Considerations:

Advantages:

- Enables users to learn on demand and when they are motivated
- Tutorial can be done independent of time and geography
- User is able to stop for breaks and to repeat sections as needed
- Easier to briefly review or skip sessions if not a beginner
- Learning through written communication may be easier than learning through oral communication (e.g. English as a second language users)
- Less ongoing staff time is needed for instruction
- Experts can devise tutorial, even though they are located at a different institutions

Disadvantages:

- Not possible to ask questions of instructor or to learn from questions asked by others learning the same topic
- Density of presentation may be high because content must be self-contained
- Individuals must be motivated enough to complete tutorial
- Frequently takes novices longer to learn via tutorial than via classroom setting

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Considerations:

- Tutorials are very labor-intensive to devise
- Hard to maintain especially if content in tutorial is changing rapidly
- Should tutorial include practice problems or a quiz?
- Using interactivity and examples to make tutorial more effective
- Choosing the right media: audio, video, web, email, combinations?
- Length of sessions—list total time needed, provide clear outline, and divide topics into modules
- What equipment and other types of infrastructure is needed to deliver tutorial?
- What level of user should you aim at?
- Lobby producers to create tutorials
- Use team to create tutorial

CMR college Tutorial classes:

In Our College we conducted Tutorial classes for following subjects(as per AUTONOMOUS syllabus): **2023-24**

Year & Semester	Subject	Faculty
II-year: II –sem	Computer Oriented Statistical Methods	Mrs. Dr.Y Sunitha Rani
III-year:I –sem:	Design Analysis & Algorithm	Mr. E Suresh Babu Mr.S. Kiran kumar
III-year:II–sem:	Machine Learning	Mr. Dr. Md Rafeeq Mr.UmaVishveshwar Mr. Y Mruthunjay Mrs. G Sumalatha

Evaluation Process: We will give 5 questions from each unit of Tutorial subjects and give 1 mark for each answer.

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Computer Organization & Architecture

TUTORIAL QUESTIONS

1. Differentiate between Isolated I/O and Memory Mapped I/O?
2. Write the major characteristics of RISC Processors?
3. Explain the following instructions: BUN, ISZ, BSA, LDA, STA?
4. Explain various data manipulation instructions with examples?
5. With an example, explain Booth Multiplication algorithm?

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Computer Oriented Statistical Methods

TUTORIAL QUESTIONS

1. State and Prove Baye's theorem?
2. Out of 800 families with 5 children each, how many would you expect to have:
   (i)3 boys
   (ii)5 girls
   (iii)either 2 or 3 boys
   (iv)at least one boy
   Assume equal probabilities for boys and girls.
3. A Poission distribution for the following data and calculate Expected Frequencies

X	0	1	2	3	4
F(X)	109	65	22	3	1

4. The mean of certain normal population is equal to the standard order of the mean of samples of 64 from that distribution find the probability that the mean of the sample size 36 will be negative?
5. The marks obtained in statistics in a certain examination found to be normally distributed, If 15% of the students greater than or equal to 60 marks, 40% less than 30 marks. Find the mean and standard deviation?

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Design Analysis & Algorithm

TUTORIAL QUESTIONS

1.Define the terms: a)Time Complexity

b)Space Complexity

2. Write Control Abstraction of Greedy Method?

3. Give the statement of the Reliability Design Problem?

4. Write Control Abstraction of Least-Cost (LC) Search?

5. What are the different mathematical notations used for algorithm Analysis? Explain them

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Machine Learning

TUTORIAL QUESTIONS

1. What is decision tree? Explain the issues in Decision tree?

2. Describe Back-Propagation Algorithm?

2. a)Write in detail about Bayesian Networks?
   b)Discuss Baye's Theorem?

4. Illustrate Genetic Algorithms with example?

5. Explain PROLOG EBG in detail?