BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE

INSTRUCTIONAL METHODS AND PEDAGOGIES:

Solving methodologies are used for enhancing learning experiences Response:

The college believes that self-learning and learning beyond syllabus have a great scope in the development of the career of an engineer. Everything in engineering cannot be taught in the class room or laboratories.

Motivation for self-learning should be provided in the classrooms.

They should also be motivated to do things themselves so that they gain confidence to try anything with

their own hands.

Facilities provided for the continuity of self-learning:

1. Central library.

2. Digital library.

3. NPTEL (National Program Technical Enhanced Learning)

4. Department Libraries.

5. MOOCS Courses.

Instructional Methods and Pedagogies

The following methods are followed:

1. Talk & Chalk: Usage of blackboard, chalk and lecture.

2. PPT: PowerPoint Presentation for the relevant topic.

3. Visualization: Showing 3D objects to the students and explaining.

4. Co-operative learning: A method of instruction characterized by students working together to reach a common goal.

5. Enquiry-based instruction: Prior intimation of the topic in the previous classes to the students for

Inquiry of the topic and asking the questions in the next class.

6. Differentiation: Summarizing the types with similarities and differences.

7. Technology: New & updated technology relevant to the course.

8. Behavior management: Wide variety of skills and techniques that teachers use to keep students Organized, orderly, focused, attentive, on task, and academically productive during a class.

9. Professional development: improving their professional knowledge, competence, skill, and Effectiveness.

10. Virtual lab: IIT virtual labs.

11. Seminars: Seminar should be given by each student.

12. Brainstorming: Giving a topic and allowing the students to think over it for new ideas.

13. Buzz group: Formation of groups with 3-4 members in each and discussion on the Topic.

14. Animated lecturers: Showing Animated videos to students.

15. Pictorial sessions: 2D objects charts.

16. Debate sessions: Assigning a topic to the students and allow them to debate.

17. Quiz: Asking Questions on the covered topic by forming the batches..

18. OHP: Overhead Projections of the images.

19. Role-play: Students are explored realistic situations by interacting with other people in a managed way in order to develop experience and trial different strategies in a supported environment.

20. Survey-based assessment.

21. NPTEL Videos.

22. Participative learning: It is a teaching method where students are actively involved in the learning process. Instead of just listening to the teacher, students work together, discuss ideas, and take part in activities that help them understand the topic better.

23. Problem-solving methodology: It is a systematic approach to identifying, analyzing, and finding solutions to problems. It helps individuals or groups tackle challenges in a structured way,

improving their ability to come up with effective and creative solutions. This methodology is often used in education, business, engineering, and everyday life to approach issues logically and critically.

24. Experiential learning methodologies: It focuses on learning through direct experience and reflection, rather than just theoretical instruction. These methods immerse learners in real-world situations or hands-on activities where they can apply knowledge, experiment, and learn from their successes and mistakes.

25. Blended learning methodology: It refers to the structured approach of integrating both traditional face-to-face classroom instruction and online or digital learning to enhance the educational experience. The key goal is to provide a more flexible and personalized learning environment, where students can benefit from direct teacher interaction and the self-paced advantages of online learning.

26. The flipped teaching methodology: It also known as the flipped classroom is an instructional approach that reverses the traditional learning model. In a flipped classroom, students first learn new material outside of class (typically online) and then apply that knowledge during in-person class time through interactive activities, discussions, or problem-solving. This shifts the role of the teacher from delivering content to facilitating deeper learning.

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BVC Institute of Technology & Science
BATLAPALEM, AMALAPURAM - 533 221