Department of Electronics and Communication Engineering

Academic Year 2024 – 2025 (Odd Semester)

Degree, Semester & Branch: VII Semester, B.E. EEE

Course Code & Title: CBM370 - Wearable Devices

Name of the Faculty member: Mr.G.Sivakumar

Innovative Practice Description

- **Unit / Topic:** UNIT V Applications of Wearable Systems
- **Course Outcome:** Explain the various applications of wearable devices in healthcare system
- **Activity Chosen:** Flipped Class Room
- **Justification:** This allows students to learn at their own pace, encourages them to actively engage with lecture material, frees up actual class time for more effective, creative, and active learning activities, and allows them to be in control of their learning.
- **Time Allotted for the Activity:** 40 minutes
- **Details of the Implementation:**

  In the field of sports medicine, wearable systems play a vital role in monitoring and enhancing athletic performance, preventing injuries, and aiding in rehabilitation. These systems include devices such as smartwatches, fitness trackers, GPS-enabled wearables, and biosensors that continuously track physiological parameters like heart rate, body temperature, muscle activity, and movement patterns. By analyzing this real-time data, athletes and medical professionals can detect early signs of fatigue or injury, optimize training routines, and personalize recovery programs. In a flipped classroom setting, students are encouraged to explore the types and functions of these wearable devices before class through videos and articles. During in-class sessions, they engage in collaborative discussions and case studies to deepen their understanding of how wearable technology is transforming modern sports medicine.

CO – PO / PSO mapping:

CO	PO1	PO2	PO3	PO4	PO6	PO7	PO9	PO10	PSO2
CO5	3	2	3	3	3	3	3	3	1

- **Images / Screenshot of the practice:**

- **Reflective Critique:**
  - ❖ ***Feedback of practice from students and other stakeholders:***
    Students feel that they have improved self-learning. They learn how to communicate with team members and work together.
  - ❖ ***Benefit of the practice:***
    Every students got equal opportunity to come forward to take part in this activity. The success of the activity was evaluated by asking the same question in Internal Assessment test II – Around 60% of students answered correct
  - ❖ ***Challenges faced in implementation:***
    The main challenge faced is that few students not exposed to flipped class room. Students struggle with self-discipline and may turn up to class without having

absorbed the lesson. To make all students to participate I started to praise others, taking turns for equal participation, and shared decision making.

References:

- Bergmann, J., & Sams, A. (2012). Flip your classroom: Reach every student in every class every day. Eugene, Or: International Society for Technology in Education.