STUDENT CENTRIC METHODS OF TEACHING –LEARNING PROCESS AT SMVITM

At SMVITM, the curriculum sourced from VTU serves as the foundation for integrating Outcome-Based Education (OBE), where experiential learning, participative learning, problem-solving, simulation, and engaging activities take center stage. This pedagogical approach is designed to holistically enhance students' emotional, intellectual, cognitive, and behavioral capabilities, enriching their overall learning experiences.

The institution's primary objective in adopting student-centric methods is to empower both learners and educators for professional competitiveness. By emphasizing a profound understanding of learning concepts, SMVITM fosters an environment conducive to academic excellence and practical skill development. Through active student engagement and a focus on comprehension, the institution strives to cultivate not only theoretical knowledge but also the practical skills necessary for professional success in today's dynamic job market.

In essence, SMVITM prioritizes student-centered learning approaches to equip its graduates with a comprehensive skill set, ensuring they are well-prepared to excel in their chosen careers and make meaningful contributions to their respective fields.

At SMVITM, student-centric teaching-learning methods are at the core of the educational approach, focusing on experiential learning, participative learning, and problem-based learning. These pedagogical strategies emphasize hands-on activities, real-world application of engineering concepts, and active engagement in the learning process. Additionally, the institution places a strong emphasis on learning beyond the classroom through various activities and initiatives aimed at fostering holistic development and preparing students for professional success.

Experiential Learning:

Experiential learning is integrated into the curriculum through laboratory courses, where students apply theoretical knowledge to practical scenarios. These courses are complemented by industry visits, providing students with practical insights into real-world applications of engineering concepts. Three-week internships offer hands-on training in advanced concepts, while field visits enable students to implement lab experiments on-site, particularly in disciplines like Civil engineering. Outreach

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programs further enhance students' practical experiences and community engagement, reinforcing the importance of experiential learning in developing well-rounded engineers.

Participative Learning:

Participative learning strategies are implemented to enhance engineering comprehension and foster collaboration among students. Peer teaching, collaborative projects, seminars, and value-added courses encourage active participation and peer learning. Moreover, MOOC courses from platforms like NPTEL, Coursera, and Udemy supplement traditional teaching methods, offering certifications in cutting-edge technologies and expanding students' knowledge base. Participation in invited talks, workshops, and webinars by industry experts enriches students' understanding of industry trends and developments. Interactive activities such as minute papers, flipped classrooms, quizzes, games, and mind maps further enhance classroom engagement, making learning a dynamic and interactive experience.

Problem-based Learning:

Problem-based learning is emphasized through programs such as Hackathons, Idiathons, and Pre-placement training sessions. These initiatives provide students with opportunities to enhance their real-time problem-solving skills and foster creativity and innovation. Involvement in collaborative project work and participation in external agencies encourage students to embrace challenges and develop practical solutions to complex problems, preparing them for the demands of the professional world.

Learning Beyond the Classroom:

SMVITM recognizes the importance of learning beyond the confines of the classroom and actively promotes various extracurricular activities and initiatives. Various committees organize activities such as street plays, visits to NGOs, blood donation camps, and participation in initiatives like Unnat Bharat Abhiyan. These activities not only foster empathy and social interaction skills but also promote community engagement and service-oriented leadership among students. Additionally, the institution conducts student induction programs, bridge courses, and remedial classes to help students adapt to the new academic culture and enhance the learning process, ensuring that every student receives adequate support to succeed academically.

In conclusion, SMVITM's student-centric teaching-learning methods prioritize hands-on learning, collaboration, problem-solving, and community engagement to prepare students for professional

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success and lifelong learning. By integrating experiential learning, participative learning, problem-based learning, and activities beyond the classroom, SMVITM aims to nurture well-rounded engineers equipped with the knowledge, skills, and values necessary to thrive in today's rapidly evolving world.

Information and Communications Technology enabled tools at SMVITM

In today's digital age, the integration of Information and Communications Technology (ICT) in educational institutions is imperative for fostering interactive, creative, and effective teaching and learning processes. At SMVITM, this commitment to modern educational practices is evident through the facilitation of various ICT tools and platforms aimed at enhancing the student experience.

The institution boasts state-of-the-art facilities, including high-speed internet access, Wi-Fi enabled classrooms, seminar halls, board rooms, conference rooms, and laboratories equipped with LCD projectors. These resources empower both faculty and students to leverage ICT tools such as PowerPoint presentations and videos, thereby enabling a deeper understanding of concepts through visual aids.

A cornerstone of SMVITM's approach to ICT integration is the utilization of the Google Classroom platform. Here, faculty members create and organize classes, share study materials like lecture notes, videos, and presentations, and administer assessments such as assignments, quizzes, and tests. This platform enhances flexibility and mobility, allowing for seamless teaching and learning experiences from any location and on any device.

Additionally, Google Meet (G-Meet) serves as a valuable tool for live classes, parent-teacher meetings, and professional development sessions, fostering real-time interaction between faculty and students. Tools like Screen Recorder and PowerPoint Voice Recorder enable the creation of engaging lecture videos, while XP Pen facilitates the visualization of complex concepts through interactive visual explanations.

During the pandemic, faculty members at SMVITM demonstrated remarkable adaptability by embracing ICT-enabled classes to ensure uninterrupted teaching and learning. Recognizing the importance of upskilling in digital pedagogies, many faculty members took proactive steps to enhance their knowledge in utilizing ICT tools effectively.

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Participation in numerous Faculty Development Programs (FDPs) and webinars focused on ICT tools for teaching and learning underscored their commitment to professional development. These initiatives provided faculty members with valuable insights, best practices, and hands-on training in leveraging various digital platforms and technologies to facilitate engaging and interactive virtual classes

To further enrich the learning experience, some faculty members at SMVITM have embraced platforms like YouTube channels and Web Blogs to disseminate knowledge and updates, fostering continuous learning outside the classroom environment. Google Forms and other automatic grading tools streamline assessment processes, enabling quick evaluation of student understanding.

Recognizing the importance of preparing students for the demands of the industry, SMVITM encourages participation in Massive Open Online Courses (MOOCs) such as SWAYAM, VTU e-Learning platform, SWAYAM videos, and Spoken Tutorials offered by esteemed institutions like the IITs. These platforms provide opportunities for students to enhance their knowledge and expertise in their respective fields beyond the confines of the traditional curriculum.

In complementing physical laboratories, Virtual Labs offer a comprehensive learning management system that allows students to conduct experiments at their own pace. Simulation software such as PSpice, Multisim, MATLAB/Simulink, and Vlabs of IITs further enhance the learning experience, providing practical insights into theoretical concepts.

Moreover, the institution's Integrated Library Management System (ILMS) facilitates seamless access to resources for both students and faculty members. Online Public Access Catalog (OPAC), e-books, and e-journals enrich research endeavors, supporting academic projects and seminars.

In essence, SMVITM's commitment to leveraging ICT tools and platforms underscores its dedication to providing a dynamic and engaging learning environment. By embracing technology-driven pedagogies, the institution empowers students to excel academically, professionally, and personally, ensuring they are well-equipped for success in the digital era and beyond.

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