Course Code	Course Name	Teaching Scheme (Hrs/week)			Credits Assigned			
		L	T	P	L	T	P	Total
LCC10	Sports Technology	-	-	2	--	--	1	1
		Examination Scheme						
		ISE						Total
		50						50

This course delves into the intersection of sports and technology, examining how advancements in technology have revolutionized various aspects of sports performance, training, analysis, and fan engagement. Students will explore cutting-edge technologies, their practical applications in sports, and the implications for athletes, coaches, teams, and fans.

Pre-requisite Course Codes		---
Course Outcomes	CO1	Explain the key technological developments in sports industry
	CO2	Explain technologies used for monitoring health & performance of a sportsperson, training, motion capture and fan & stadium engagement
	CO3	Describe principles of sports equipment design with ethical, social and regulatory considerations
	CO4	Prepare a project exploring a specific aspect of sports technology

S.N.	Topics
1	**Introduction to Sports Technology** o Defining sports technology and its significance in modern sports o Historical overview of key technological developments in sports o Ethical considerations and challenges in the use of sports technology
2	**Wearable Technology in Sports** o Overview of wearable devices for athlete monitoring and performance analysis o Examples of wearable sensors, smart clothing, and biometric tracking devices o Applications in injury prevention, rehabilitation, and optimizing training regimes
3	**Data Analytics and Sports Performance** o Introduction to sports analytics and performance metrics o Data collection methods and analysis techniques (e.g., tracking systems, video analysis) o Using data analytics to enhance athlete performance and optimize team strategies
4	**Virtual Reality and Simulation in Sports** o Understanding virtual reality (VR) and augmented reality (AR) technologies o Applications of VR/AR in sports training, skill development, and game preparation o Immersive experiences for fans through VR/AR broadcasting and spectator engagement
5	**Sports Biomechanics and Motion Analysis** o Exploring biomechanical principles in sports performance o Motion capture technology and its role in biomechanical analysis o Case studies of motion analysis in sports training, technique refinement, and injury prevention

6	**Sports Engineering and Equipment Design** o Overview of sports equipment design and engineering principles o Innovations in sports equipment technology (e.g., footwear, apparel, protective gear) o Performance testing, materials science, and sustainability in sports equipment
7	**Fan Engagement and Stadium Technology** o Enhancing the spectator experience through technology o Stadium infrastructure and amenities (e.g., scoreboards, lighting, seating) o Digital engagement platforms, social media integration, and interactive fan experiences
8	**Future Trends and Implications** o Emerging technologies shaping the future of sports o Ethical, social, and regulatory considerations in sports technology o Opportunities and challenges for athletes, coaches, teams, and the sports industry

ISE: Assessment by Mentor=30 Marks, Attendance=10 Marks, Active Participation in activities/Observation by Mentor=05 Marks, Weekly reflections on course topics and personal experiences uploaded on the blog/portal created for the course=05 Marks