INDIAN INSTITUTE OF TECHNOLOGY TIRUPATI
भारतीय प्रौद्योगिकी संस्थान तिरुपति
Yerpedu-Venkatagiri Road, Yerpedu Post, Tirupati District, Andhra Pradesh - 517 619

1.	Title of the course	Fluid Mechanics
2.	Course number	CE211L
3.	Structure of credits (L-T-P-C)	2-0-0-2
4.	New course/modification to	Modified with CE207L/FLUID MECHANICS AND HYDRAULICS
5.	To be offered by	Civil and Environmental Engineering
6.	Proposed by	S Prasanna Venkatesh
7.	Prerequisite	None
8.	**Course Objective(s):** To outline and elucidate the fundamental aspects of fluid mechanics such as the physical properties of fluids, their classification and their behaviour at rest and in motion.	
9.	**Course Content:** Introduction: definition of a fluid and its physical properties; Fluid statics: hydrostatic pressure, forces on submerged surfaces, manometry, buoyancy, uniformly accelerated motion; Fluid Kinematics; Fluid dynamics: Reynolds' transport theorem and its application to conservation of mass, momentum and energy, Bernoulli equation, laminar and turbulent flows; Dimensional analysis and similitude; Flow measurement devices: Pitot tube, venturimeter, orificemeter, weirs and notches; Flow through pipes: friction losses, minor losses.	
10.	**Textbook(s):** 1. White F M, Fluid Mechanics, 8th Edition, McGraw Hill (2017). 2. Som S K, Biswas G and Chakraborty S, Introduction to Fluid Mechanics and Fluid Machines, 3rd Edition, McGraw Hill (2017).	
11.	**Reference(s):** 1. Munson B R, Okiishi T H, Huebsch W W and Rothmayer A P, Fundamentals of Fluid Mechanics, 8th Edition, Wiley (2020).	