



**TULSIRAMJI GAIKWAD-PATIL College of Engineering and Technology**

Wardha Road, Nagpur - 441108

Accredited with NAAC A+ Grade

Approved by AICTE, New Delhi, Govt. of Maharashtra

**(An Autonomous Institution Affiliated to RTM Nagpur University)**



Department of Biotechnology

## **B. Tech Biotechnology**

### **Course Name BBT3601: Mass Transfer in Biotechnology**

<b>BBT3601</b>	<b>Course Outcomes</b>
<b>CO1</b>	Understand principles & applications of molecular diffusion, including its relevance in oxygen transfer methodology.
<b>CO2</b>	Analyze vapor-liquid equilibrium data, estimate VLE, and perform differential distillation, equilibrium distillation, and rectification processes effectively.
<b>CO3</b>	Comprehend gas absorption processes, design plate columns, and analyze mass transfer in packed and fluidized beds for industrial applications.
<b>CO4</b>	Apply liquid-liquid extraction principles, understand supercritical fluid extraction, and determine stages for contacting processes.
<b>CO5</b>	Understand drying characteristics, evaluate rates, select dehydration equipment, and grasp crystallization theory and applications.