

**Subject: PG Elective course for Environmental Science/biological science/chemistry/Agriculture**

**Course: Biomass characterization**

### **Development Team**

Course Coordinator: Dr. K. Arunkumar, Ph.D  
Associate Professor & Head  
Department of Plant Science  
Central University of Kerala  
Kasaragod-671320, Kerala, India

Content Writer: Dr. K. Arunkumar, Ph.D  
Associate Professor & Head  
Department of Plant Science  
Central University of Kerala  
Kasaragod-671320, Kerala, India

Content Reviewer: Prof. (Dr.) Muthukumar Muthusamy, Ph.D  
Professor & Head  
Department of Environmental Science,  
Central University of Kerala,  
Kasaragod-671320, Kerala, India

### **Module Title 37. Biomass process optimization**

**Module ID: PO/BPOZ/37**

**Objectives:** To study the optimization of various factors related to biomass conversion process for improving the product quality and product yield.

**Key words:** Biomass processing; Biomass conversion process; combustion; Gasification; pyrolysis; Fermentation.

**Prerequisites:** Biomass storage; Composition of biomass; Various biomass processing steps; Suitable condition for biomass processing.

**Outcome:** At the end of the module, learners understand about various factors such as the composition of biomass, temperature and pH inside the reaction chamber, moisture content in