

## ***Course Content***

The duration of the course would be three weeks and it would be divided into three modules:

### **Module I: Basic understanding of biotechnology**

The course begins with lectures to bring about basic understanding of the science of the biotechnology; mass cloning of selected genotypes; application of biopesticides and biofertilizers, development of new varieties and designing crops (Genetic Modifications) for particular traits along with historical perspective and development of genetically modified organisms. .

### **Module II: Environmental and bioethical concerns of new technologies and Legal framework for biosafety regulations and guidelines for risk assessment and management.**

Environmental and bioethical issues concerning modern biotechnology will also be discussed. The broader impact on society and genuine concerns regarding ethical issues will be discussed with the help of scientific data. The efforts and further need to enhance Public awareness and participation will be highlighted.

Much before the Convention on Biodiversity (CBD) and the Biosafety Protocol (BSP) many countries had initiated formulation of legislation and laying guidelines for regulation of GMOs and related products. A clear understanding of this well-defined regulatory framework would be the main focus.

The legal framework for Biosafety regulation and Guidelines for Risk assessment and risk Management with special reference to developing countries will be evaluated.

This module will deal with **the regulatory mechanism for regulation of recombinant products** in different countries.

The session would also cover the current scenario in the area of **regulation of GM food and feed products**. The critical gaps, keeping in view the national regulation and the international background of the BSP, would be highlighted.

This will be further substantiated with Field visit to the institution\ and industry conducting research on various aspects of biotechnology.

### **Module III : International frameworks to regulate transboundary movements of living modified organisms**

To have a better appreciation of the issues involved, a brief introduction to the international perspective in evolution of modern biotechnology research and applications will be given. Besides, there would be discussions regarding regulatory practices with special focus on landmark cases and impact studies. Scenarios in the developed world will be compared with the developing countries. The implications of Cartagena biosafety protocol, especially on transboundary movements of the LMOs and other international obligations will also be discussed.