

**SARDAR PATEL UNIVERSITY**  
**Programme: M.Sc (Home Science)**  
**Subject: Food Biotechnology**  
**Semester: III**  
**Syllabus with Effect from: June - 2013**

<b>Paper Code: PH03EFBT03</b>	<b>Total Credit: 4</b>
<b>Title Of Paper: Nutritional Biotechnology</b>	

Unit	Description in detail	Weightage (%)
I	Principles and methods of plant tissue culture, development of transgenic plants.	
II	Enhancing the nutritional quality of foods - manipulation of sucrose and starch content; manipulation of fatty acid composition of oils, enriching the protein content, increasing the content of methionine & lysine in feed storage proteins increasing the levels of vitamins and mine ovals.	
III	Removal or minimizing the antinutritional factors and toxic molecules from food - phytate, oxalic acid, neurotoxins etc., decreasing the contents of pesticides, herbicides & heavy metals - use of bioinsecticides, development of herbicide-resistant plants etc.	
IV	Increasing the shelf life of fruits.	
V	Development of food value metabolites - food colors, food flavors, food additives sweeteners etc.	
VI	Animal biotechnology for increasing meat quality and milk production.	

