Name of the Department: Food Technology

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Course</th>
<th>Course Code</th>
<th>Year of offering</th>
<th>Semester (Odd/Even) during which it is offered</th>
<th>Offered to</th>
<th>No. of students enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Integrated approach on preventive nutrition</td>
<td>VAC-FT 001</td>
<td>AY 2021-2022</td>
<td>Odd</td>
<td>3rd year</td>
<td>19</td>
</tr>
<tr>
<td>2</td>
<td>Anti diabetic potential of underutilized fruits in India: Measurements and analyses</td>
<td>VAC-FT 002</td>
<td>AY 2021-2022</td>
<td>Even</td>
<td>3rd year</td>
<td>24</td>
</tr>
<tr>
<td>3</td>
<td>Food and Mental Health</td>
<td>VAC-FT 003</td>
<td>AY 2022-23</td>
<td>Odd</td>
<td>3rd year</td>
<td>64</td>
</tr>
<tr>
<td>4</td>
<td>Sensory Science</td>
<td>VAC-FT 004</td>
<td>AY 2022-23</td>
<td>Even</td>
<td>3rd year</td>
<td>64</td>
</tr>
</tbody>
</table>
Syllabus of the Value Added Courses

A. Course name: Integrated approach on preventive nutrition
   Course code: VAC-FT 001
   Credit points: 3
   Contact hours: 30 h (27 hours: Teaching, 3 hours: Assessment and evaluation)

Module 1: Fundamentals of holistic and preventive nutrition; Therapeutic nutrition-definition, benefits and application; Food as medicine and dietetics; Diet therapy.

Module 2: Basic of nutritional association with fitness; Nutrition in daily basis on a family; Maternal and child nutrition; Nutritional aspects on life span of elderly; Neutraceuticals and functional formulations on daily diet; Community nutrition.

Module 3: Introduction to Food safety; Nutritional ethics; Nutrition and public health; Guidelines of WHO and Governments in enhancing immunity through nutrition; Contribution of nutrition in preventing life threatening diseases- case study.
B. Course name: **Anti diabetic potential of underutilized fruits in India: Measurements and analyses**

Course code: VAC-FT 002  
Credit points: 3  
Contact hours: 30 h (17 hours: Theory, 10 hours: Practical, 3 hours: Assessment and Evaluation)

*Module 1:* Definition and types of diabetes; implication of diabetes on the human lifestyle; role of different food components on acceleration or prevention of diabetes: dietary fibre, reducing and non-reducing sugars, amylase activity, presence or absence of bioactive compounds.

*Module 2:* India: the fruit basket of the world; The underutilized fruits of India and the reason behind their low consumption; Proximate composition and phytochemical reserve of underutilized fruits of India: jamun, amla, bael, rambutan, jackfruit, bilimbi and kokum; Anti-diabetic potential of underutilized fruits of India: jamun, amla, bael, rambutan, jackfruit, bilimbi and kokum – case studies; Novel measures for increasing cultivation, shelf-life and scope of utilization of anti-diabetic underutilized fruits of India.

*Module 3:* Estimation of starch, dietary fibre, reducing and non-reducing sugars, glucose, total phenolics content, total flavonoids content, glycemic index, α-amylase inhibition activity and glucose retardation index of food using various *in vitro* laboratory methodologies.
C. Course name: **Food and Mental Health**
   
   Course code: VAC-FT 003
   
   Credit points: 3
   
   Contact hours: 30 h (27 hours: Theory, 3 hours: Assessment and Evaluation)

**Module 1:** Basic nutrients in food: carbohydrates, proteins, fats, vitamins and minerals. Their structure, classification and functions. Structure of human brain. Function of different parts of human brain. Role of nutrition and cognitive performance.

**Module 2:** Food and neurotransmitters. Influence of carbohydrates, proteins (especially amino acids) and fats on brain responses.

**Module 3:** Effect of geographical location and cultural practices on food and mood: Lifestyle, Comfort foods, Stress hormone (Epinephrine), Serotonin theory, Effect of carbohydrate and protein consumption on serotonin synthesis. Effect of consumption of fruits, vegetables and omega-3 fatty acids (Anti-inflammatory Explanation) on mental health, Role of chocolate and caffeine in elevation of human mood.
D. Course name: Sensory Science
   Course code: VAC-FT 004
   Credit points: 3
   Contact hours: 30 h (27 hours: Theory, 3 hours: Assessment and Evaluation)


Module 2: Biology of sensory evaluation. Components of sensory evaluation: Color, Texture and sound, Flavor and aroma. Effect of these components on consumer preference.