

# Programme Outcomes, Programme Specific Outcomes and Course Outcomes For PG Programmes

**Programme Name: M.Sc on Food Technology**

***Number of Semesters: 4***



Name of the Department  
**University of North Bengal**  
West Bengal, INDIA

### Programme Outcomes:

- To establish itself as the leader in human resource development for supporting the food technology sector.
- To provide knowledge and skills for better preservation techniques, processing and value addition to agricultural products.
- To promote research and development for food product and process and guarantee sanitation and safety of processed food items.
- To provide well equipped infrastructure and research facilities to students for carrying out research smoothly in allied fields of food technology.
- To develop good professional relationship with the leading institutions at national and international level.
- To develop the spirit of competition among students and help them to cultivate enthusiasm, self- confidence, problem solving capacity, self respect and to develop communication skills.
- To conduct placement drives for top Food and allied Industries, Institutions or Government Organization through campus selection.
- To develop awareness among the students about environmental issues and work towards sustainable developments.

### Programme Specific Outcomes:

- To impart knowledge in various aspects of Food Technology through Theory and Practical knowledge.
- To impart the knowledge about various compounds such as protein, carbohydrates, lipids amino acids, minerals, vitamins etc associated with the chemical compositions of food, their structures and functions.
- The students can gain knowledge about some very essential topic of nutrition and its metabolism balance inside the body.

- To make the students familiar with the technologies of food processing and preservation of plant and animal foods, cereals, pulses, oilseeds, fruits vegetables, spices, meat, fish, poultry, sea food, milk and dairy products.
- To gain concepts of food safety and quality managements, national and international food laws and regulations as well as importance of food engineering and packaging in food industry.
- To gain knowledge about advanced technologies adapted in various food industries by physically visiting different food industries.
- To develop broader understandings on various aspects of management of waste coming from food Industries as well as from homes starting from its generation to processing with options for reuse and recycle, transport, and disposal practices so as to contribute towards sustainable development.
- To development students' understanding and communication skills through various assignments which will enable them to develop skills in writing and effective's interpersonal skills. Presentations in different topics enhances their confidence, ability to express themselves & presentation skills
- Give students assistance in preparing for competitive exams e.g. NET, GATE, etc

#### Course Outcomes

SEMESTER—I		
Course Code	Course Name	Course Outcomes
FOOD-CT 101	Food Chemistry and Nutrition	<ul style="list-style-type: none"> <li>• To understand the chemistry of foods - composition of food, role of each component and their interaction.</li> <li>• To understand the functional aspects of food components and to study their role in food and nutrition.</li> <li>• To understand the general chemical structures of the major components of foods (water, proteins, carbohydrates, and lipids).</li> <li>• To understand the pigments and flavours and their role of food industries.</li> <li>• To understand the role of anti-oxidants, allergens, toxins and anti-nutritional factors in foods.</li> <li>• To understand sources and functions of different nutrients, diseases related to their deficiencies, their transport, digestion and metabolism</li> </ul>
FOOD-CT 102	Principles of Food Engineering	<ul style="list-style-type: none"> <li>• To understand the principle of Unit operation</li> <li>• To acquaint with fundamentals of food engineering and its process</li> <li>• To understand the basics of designing of food plant and systems</li> <li>• To understand basics of designing of food plant and storage system</li> </ul>

		<ul style="list-style-type: none"> <li>To be familiarized with basic principles of refrigeration, freezing, fluid flow, heat and mass transfer, steam, psychrometrics etc. from food industrial point of view</li> <li>To apply the knowledge gained for solving numerical and others problems</li> </ul>
FOOD-CT 103	Food Microbiology	<ul style="list-style-type: none"> <li>To know the important genera of microorganisms associated with food and their characteristics.</li> <li>To understand the role of microbes in fermentation, spoilage and food borne diseases</li> <li>To understand the important genera of microorganisms associated with food and their characteristics, their growth pattern and parameters.</li> <li>To comprehend the role of the microorganisms in spoilage of foods and methods of their control.</li> <li>To gain knowledge about the beneficial role of microorganisms and different types of fermented foods.</li> <li>To identify the role of microorganisms in food borne diseases and control measures</li> <li>To understand the laboratory techniques to detect, quantify, and identify microorganisms in foods</li> </ul>
FOOD-CP 104	Food Chemistry and Nutrition	<ul style="list-style-type: none"> <li>To develop knowledge and skills for estimation of important compositions of food such as protein, carbohydrates, fats etc.</li> <li>To develop knowledge and skills for estimation of essential components such as moisture, acidity, ash etc</li> <li>To develop skills for estimations of minerals in food.</li> </ul>
FOOD-CP 105	Principles of Food Engineering	<ul style="list-style-type: none"> <li>To develop skills for determination of viscosity of various fluids</li> <li>To develop skill for determining various thermal properties such as thermal conductivity, thermal diffusivity, calorific value and specific heat.</li> <li>To develop skill for designing various pumping systems.</li> <li>To gain knowledge about various types of freezers.</li> <li>To identify their prospective area of work like marketing, finance, logistics, etc. and also to give students a platform to enhance their interpersonal skills during industrial visits.</li> </ul>
FOOD-CP 106	Food Microbiology	<ul style="list-style-type: none"> <li></li> </ul>
FOOD-CT 107A	Computer applications in food industry	<ul style="list-style-type: none"> <li>Basic knowledge of computer applications and their implementation in various fields of Food Industries.</li> </ul>
FOOD-CT 107B	Advanced Microbial Technology	<ul style="list-style-type: none"> <li></li> </ul>
FOOD-CT 107C	Nutraceuticals, Health foods and Specialty Foods	<ul style="list-style-type: none"> <li>Gain knowledge on sources of Nutraceuticals, Health foods and Specialty Foods</li> <li>Acquire skills to categorize nutraceuticals.</li> </ul>

		<ul style="list-style-type: none"> <li>• Gain awareness on nutraceuticals of microbial origin.</li> <li>• Obtain knowledge of healthy foods and nutraceuticals in health and diseases</li> <li>• Understand the regulatory aspects of healthy foods and nutraceuticals</li> </ul>
FOOD-CT 107D	Food Toxicology	<ul style="list-style-type: none"> <li>• To develop knowledge of toxicants that are associated with both plant and animal foodstuffs that occur as natural constituents and contaminants</li> <li>• To introduce students to methods for evaluating different levels of toxicity in foodstuffs.</li> <li>• To gain knowledge about natural constituents that are toxicants and natural contaminants that act as toxicants</li> <li>• To acquire knowledge about various types of toxicants, chemistry, their mode of action, significance, food sources, and possible detoxification methods.</li> </ul>