

UNIVERSITY OF MYSORE
Established: 1916

Vishwavidyanilaya Karyasoudha
Crawford Hall, Mysore-570 005

No.AC.2(S)/151/2021-22

Dated: 18.08.2021

NOTIFICATION

Sub: Syllabus-PG Diploma In Food safety, Hygiene & Applied Nutrition course.

- Ref:** 1. Decision of Board of Studies in Food Science & Nutrition (PG) meeting held on 04.12.2020.
2. Decision of the Faculty of Science & Technology Meeting held on 08.02.2021.
3. Decision of the Academic Council meeting held on 07.04.2021.

The Board of Studies in Food Science & Nutrition (PG) which met on 04.12.2020 has approved the syllabus proposed for the PG Diploma in 'Food safety, Hygiene and Applied Nutrition' retrospectively from current academic year 2020-21 with minor modifications.

The Faculty of Science and Technology and Academic Council meeting held on 08.02.2021 and 07.04.2021 respectively have approved the above said proposal and the same is hereby notified.

The detailed PG Diploma In Food safety, Hygiene & Applied Nutrition course Food Science & Nutrition (PG) course is annexed. The contents may be downloaded from the University Website i.e., www.uni-mysore.ac.in.

DRAFT APPROVED BY THE REGISTRAR

18/8
DEPUTY REGISTRAR (ACADEMIC)
Deputy Registrar (Academic)
University of Mysore
Mysore-570 005

To:

1. The Registrar (Evaluation), University of Mysore, Mysore.
2. The Dean, Faculty of Science & Technology, DoS in Psychology, MGM.
3. The Chairperson, DoS in Food Science & Nutrition (PG), Manasagangotri, Mysore.
4. The Deputy/Assistant Registrar/Superintendent, AB and EB, UOM, Mysore.
5. The P.A. to the Vice-Chancellor/Registrar/Registrar (Evaluation), UOM, Mysore.
6. Office file.

UNIVERSITY



OF MYSORE

NEW PROGRAM

Post –graduate Diploma Program:

FOOD SAFETY, HYGIENE and APPLIED NUTRIITON

Two Semester Choice Based Credit based Scheme
&
Continuous Assessment of Grading Pattern System

(FCBCBS-CAGP SYSTEM)

Fully Self finance scheme

SYLLABUS

**DEPARTMENT OF STUDIES IN FOOD SCIENCE AND NUTRITION
MANASAGANGOTRI
MYSURU – 570 006**

2020-21

PREAMBLE:

Food Safety is becoming a global concern Food exports from India need to meet these concerns. Indian food professionals employable in the foreign countries should be capable of developing and managing the food safety systems there.

Of late, Indian food Industry is also getting reorganized with stringent food safety systems either to cater to foreign food markets or to meet the provisions of Indian Food Safety & Standards Act- 2006

To achieve the growing demand of professionals in the Food Safety & Quality Management line, it is imperative that the necessary support infrastructure to train the required manpower is in place. As the food industry advances and adopts various levels of automation, the demand for skilled manpower in the food processing industry will further increase phenomenally

The Food Safety Standards Authority of India (FSSAI) has initiated a framework for engaging Higher Education Institutes (HEIs) to enable a paradigm shift from 'Prevention of Food Adulteration' to 'Self-compliance' by introducing programs on Food Safety and Applied Nutrition.

The professional diploma program is designed to prepare food scientists with appropriate scientific background for job opportunities in food safety and quality assurance, monitoring and certification process in the food industry and Government. The course provides a systematic understanding of food safety issues, their origin and solutions at National and International level and the applicable regulatory mechanisms.

The course offers papers followed by an Industry internship and semester end exam.

Objectives of the course:

- 1- Impart comprehensive knowledge on the issues of food safety and quality**
- 2- Build technical proficiency in undertaking auditing in food safety and quality assurance in food processing chain i.e., from farm to fork.**
- 3- Develop India's capability to meet the global food safety and quality requirements and enhance the competitiveness of food products.**

Number of seats per year: 10 [GM- 7, OBC-1, SC-1, ST-1]

Mode of selection of students: Entrance Test conducted by the University of Mysore for admissions to MSc- Food science and Nutrition

Eligibility for admission

Undergraduate students of Food science and Nutrition/ Food Technology/Applied Nutrition/Food science/Food Processing/Clinical Nutrition and Dietetics/Home science

Course Format

1. This is a full time Professional diploma course of One year, with 40 credits including Theory and Practical Classes, project work, In-plant training and examination.
2. The medium of instruction will be English.
3. Students must complete all credit hours (40) with a 5.5 grade point average.

Internship

Students who successfully complete the above credits will be given opportunities to intern with the below selected Food industries /companies on the prospect that it will be potentially converted into jobs on their abilities.

1. ITC
2. Hector Beverages
3. Del Monte
4. Hatsun
5. Elite foods
6. Britannia
7. Nestle
8. Modern Foods

Fully Self Finance scheme

Fee – Rs 75,000/- for 2 semesters

UNIVERSITY OF MYSORE
Department of Studies in Food science and Nutrition

CREDIT MATRIX FOR Food safety, Hygiene and Applied Nutrition
PG Diploma 2020-21(FCBCS)

Semester I						
Paper code	Title of the Course	HC/SC	L	T	P	Credit
1.1	Food safety and Hygiene	HC	4	0	0	4
1.2	Food security and capacity building	HC	4	0	0	4
1.3	Health Foods & GM foods	HC	4	0	0	4
1.4	Applied Nutrition	HC	4	0	0	4
1.5	Practical 1- Sampling & Analytical Techniques in Food safety	HC	0	0	4	2
1.6	Practical 2 – Microbiological food safety	HC	0	0	4	2
	Total Credits					20

Semester II						
Paper code	Title of the Course	HC/SC	L	T	P	Credit
1.1	Project work	HC	0	0	20	10
1.2	Seminar	HC	0	4	0	2
1.3	Food Industry placement	HC	0	8	0	8
	Total Credits					20

SYLLABUS

1.1 Food Safety and hygiene

{4+0+0=4 C}

1. Introduction to food safety and safe food, naturally-occurring & environmental contaminants, and toxicants. Factors affecting food safety through the supply chain.
2. Sources of contaminants- physical, chemical and microbial hazards in foods, principles underlying spoilage- chemical changes caused by microorganisms in:
 - a. Cereals, pulses and their products
 - b. Vegetables and fruits
 - c. Flesh foods, eggs and poultry
 - d. Milk and milk products
3. Food adulteration, types of adulteration in common foods, impact on human health and tests to detect common adulterants and ad-mixtures.
4. Food safety management systems- Importance and application of food regulation in the Indian and Global context, responsibilities for maintaining and enforcing food safety- FSSAI, CODEX ALIMENTARIUS, HACCP, ISO 22000 series, TQM and codes of GMP. Auditing and accreditation (BIS, QCI, AGMARK etc).
5. Food additives- Definition, classification, role of additives in processed foods. Safe levels of additive uses and the institutions involved in the process.
6. Current scenario- emergence of street foods and convenience foods and the related safety concerns

1.2 Food security and capacity building

{4+0+0=4 C}

1. Introduction to food & nutrition security- Definition, factors affecting food & nutrition security, national and house-hold food security, issues & challenges of food security
2. Food and Agriculture issues- Climate change, soil and environment, biodiversity and ecosystem, global issues in agriculture, green house effect
3. Food supply, food chain safety and security- role of PDS, MDM and ICDS programmes

4. Capacity building in public health nutrition- The need, national and international organisations, nutrition education
5. Integrating nutrition and food security programmes- Good governance practices and human rights principles, Government of India programmes and initiatives.

1.3 Applied Nutrition

{4+0+0=4C}

1. Food choices and issues- Food systems, relationship between diet, nutrition and health, food processing and food safety, contemporary issues relating to nutrition.
2. Nutrients- classification, sources and functions.
 - a. Macronutrients- Carbohydrates, Protein, Fat- functions, sources deficiency disorders and recommended intakes.
 - b. Micronutrients- Minerals – Calcium, Iron, Iodine, and other elements. Vitamins – A, D, E, K, B-complex, Vitamin C.
3. Concepts and principles of current dietary guidelines- general principles of deriving RDA, Reference body weights of Indian adults, significance of RDA
4. Nutrition for health and fitness- Definition, benefits, components and indicators of fitness. Nutritional requirements of exercise- fluids, vitamins and minerals, energy, macronutrient needs and distribution, body adaptation. Approaches to the management of fitness and health in weight management.
5. Alternative systems for health and fitness- Ayurveda, yoga and meditation and other methods.

1.4 Health Foods and GM foods

{4+0+0=4 C}

1. Health foods- Definition, history, types and classification. Functional foods and nutraceuticals, bioactive compounds and anti-oxidants and dietary supplements. Nutrition labelling and health claims.
2. Food Allergy- Causes, food allergens, management & health concerns.

3. Organic foods- definitions, natural and organic food, organic agriculture, labelling & marketing, nutritive content, organic food and farming education & research.
4. Pre- & pro-biotics- definition, uses in food, safety aspects and claims
5. Genetically Modified (GM) Foods- Definition, genetic engineering in foods, genetically engineered plants and animals, potential hazards, GM laws

1.5 Practical 1 – Sampling and Analytical techniques in Food safety {0+0+4=2 C}

- Importance of sampling, sampling techniques and concept of good laboratory practices.
- Analysis of water- physico-chemical & microbiological
- Detection of food adulterants and ad-mixtures in common food using simple tests/ kits.
- Assessment of shelf-life of foods
- Demonstration of proximate analysis of foods
- Field visits to laboratories/ food business units

1.6 Practical 2- Microbiological Food safety {0+0+4=2 C}

- Introduction to aseptic practices and sterilisation, preparation of nutrient media
 - Staining techniques, culture and enumeration techniques
 - Identification of microorganisms
 - Rapid methods and detecting food spoilage specific microorganisms
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