



B.Sc. Food Science and Management

School of Food Science

M.O.P. Vaishnav College for Women

(Autonomous College affiliated to University of Madras and Accredited by NAAC)
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Genesis

The *School of Food Science* was started in the year *1996* with an undergraduate course—*Nutrition, Food Service Management and Dietetics*.

B.Sc. Food Science and Management and *M.Sc. Food technology and Management* have been introduced from the academic year *2008-2009*.

Uniqueness of the Department

- Students undergo *internships* in food processing industries at the undergraduate level.
- *Novel product development* is an exercise which provides students with an opportunity to prepare and package new processed alternatives that offer convenience, variety, and nutrition.
- Students are given opportunities to participate and present research papers in *National and International seminars and conferences*.
- An *in house bakery Beyond Breads* has been set up featuring innovative new products for preparation.
- *Synergy with Industry* - The School of Food Science has an association with leading Multinational food companies for our activities of the department, placement and internships.
- *Memberships to Associations* The students and faculty are members of the Association of Food Scientists and Technologists (India), Nutrition Society of India and Indian Dietetic Association.





B.Sc. Food Science and Management

This unique course, first of its kind in the country has been designed for students who are interested in a management career in the food industry or related sectors. This course offers a challenging opportunity to develop both skills in business and scientific expertise .

Objectives

- To prepare students for leadership positions within the food industry and related sectors.
- To understand the need and scope of the functional areas of management in the food industry
- To understand of the core scientific disciplines involved in food science and business-oriented subjects and marketing within the context of the food industry.
- To train the students as enterprising entrepreneurs in the food industry and related sectors.





Subjects of study

<ul style="list-style-type: none">• English• Language (Tamil/Hindi/Sanskrit/French)• Normal and Therapeutic Nutrition• Food Preservation and Processing• Food Analysis• Phytotherapy• Food Product Development	<ul style="list-style-type: none">• Biosciences• Food Science and Basic Cookery• Food Chemistry• Experimental foods• Food Microbiology• Basic Physiology• Food Sanitation and Hygiene• Food Quality Assurance• Basics of Nutrition	<ul style="list-style-type: none">• Basics of Management• Accounting and Finance for Business Operations• Business Communication• Marketing Research and Consumer Behaviour• Operations Management• Food Merchandising• Food Logistics Management• Visual Merchandising• Food Packaging
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Special Skill Courses

Special Skill courses are offered to acquire professional skills related to their course of study.

The courses offered are:

- Bakery and Confectionary
- Cake Architecture
- Specialty Cuisines
- Computer Information Analysis and Processing



Self Learning Courses

- Interior Decoration
- Health Concepts
- Global Food Systems
- International Cuisines
- Nutrition and Weight Management





Teaching methodologies

- Directed reading and study
- Outbound Training – Attending international conferences
- Activity Based Teaching – Home experiments, Practice schools, Demonstrations
- E-Learning – Web Downloads & E-content
- Research Based – Review of peer reviewed journals, Surveys & Data Analysis





Departmental club - Prakriti

Prakriti, the club of the department helps in stimulating a sense of competitiveness *and challenge in the young minds*. The prominent activities conducted include:

Health Fairs and Camps

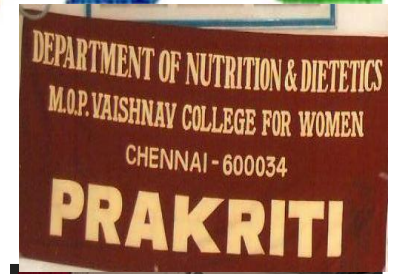
- Nutrifest
- Osteoporosis camp
- Health Express

National and Regional conferences organized

- Processed foods : A Trend Beyond Boundaries
- Emerging Trends and Opportunities in Food Processing Sector
- Honey – An Alternative Sweetener
- Nutrition Transition
- Diabetes :Glycemic Index – A Global Scenario

Workshops

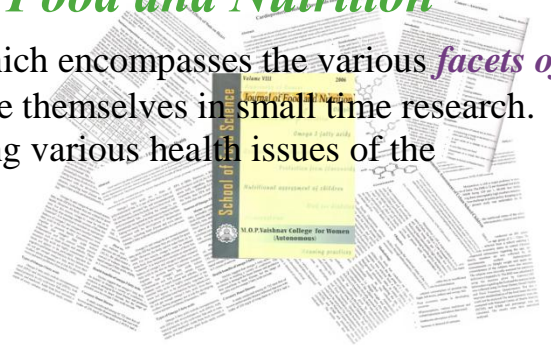
- Global Cuisines
- Dietetics in Practice
- Enteral and Parenteral Nutrition
- Assessment of Nutritional Status



Departmental Journal “The Journal of Food and Nutrition”

The department brings out an annual in-house Journal which encompasses the various *facets of Foods & Nutrition*. The students are encouraged to engage themselves in small time research. The students publish review articles and surveys addressing various health issues of the community. Some prominent themes are-

- Foods from Unconventional Sources
- Breakfast Consumption Patterns
- Obesity
- Food additives
- Stress

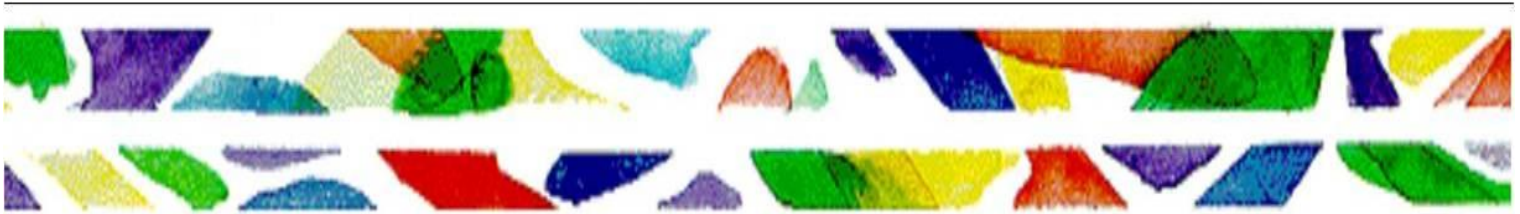




Practice School

- **Bakery** – An in house bakery is being set up by the department featuring *innovative new products* for preparation and sale of bread and baked products.
- **Food Preservation** – The third year students of the department put up *a sale of preserved products* such as jams, pickles, squashes by preparing, packaging and storage in the food science laboratory of the college.
- **Health Cafeteria** – The second and third year students of the department run a Health cafeteria with the concept '*Best, healthy Food at Lowest Prices*' for the staff of the college. A variety of menus from different cuisines were prepared with an annual sales turnover of Rs.42, 000.
- **Sports Cafeteria** – The students are involved in planning, purchasing and supervising the menu for meals served in the *hostel mess*.





Research & Development

A variety of innovative and wholesome products are developed as a part of *New Product Development* to evoke the spirit of research and development among the students. The product is formulated, tested and evaluated. Products developed by the students are scientifically presented as papers which have won many prizes and accolades. The lists of new products developed are:

Ready to eat:

- Value added Herbal Bread
- Pumpkin incorporated Bakery Products
- Mango Peel Powder incorporated Bread.

Health Drinks:

- Apple Peel Malt Mix
- Dehydrated apple pomace beverage mix.

Extruded Products:

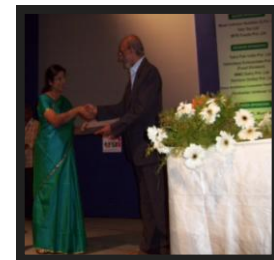
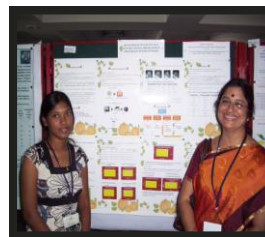
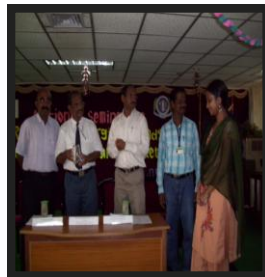
- Pasta enriched with Pumpkin powder
- Multi Grain Sevai

Preserved Products:

- Date and Pumpkin preserve
- Grape and Plantain stem crush
- Germinated fenugreek pickle

Ready to cook:

- Frozen Vegetable Balls
- Instant Adai Mix with incorporation of Cauliflower leaf
- Barley Bun
- Sugar Free, Low Fat Cookies with *Cassia auriculata*





SYNERGY WITH RESEARCH INSTITUTES

Research Internships

Guest Lectures
Conference
Workshops

Centre for Indian Knowledge Systems

Central Food Technological Research Institute

Indian Institute of Crop Processing Technology

M.S. Swaminathan Research Foundation

Advanced Laboratory Training
Library resources

SYNERGY WITH THE INDUSTRY

Nestle India Limited

Marico

E-farm

Britannia

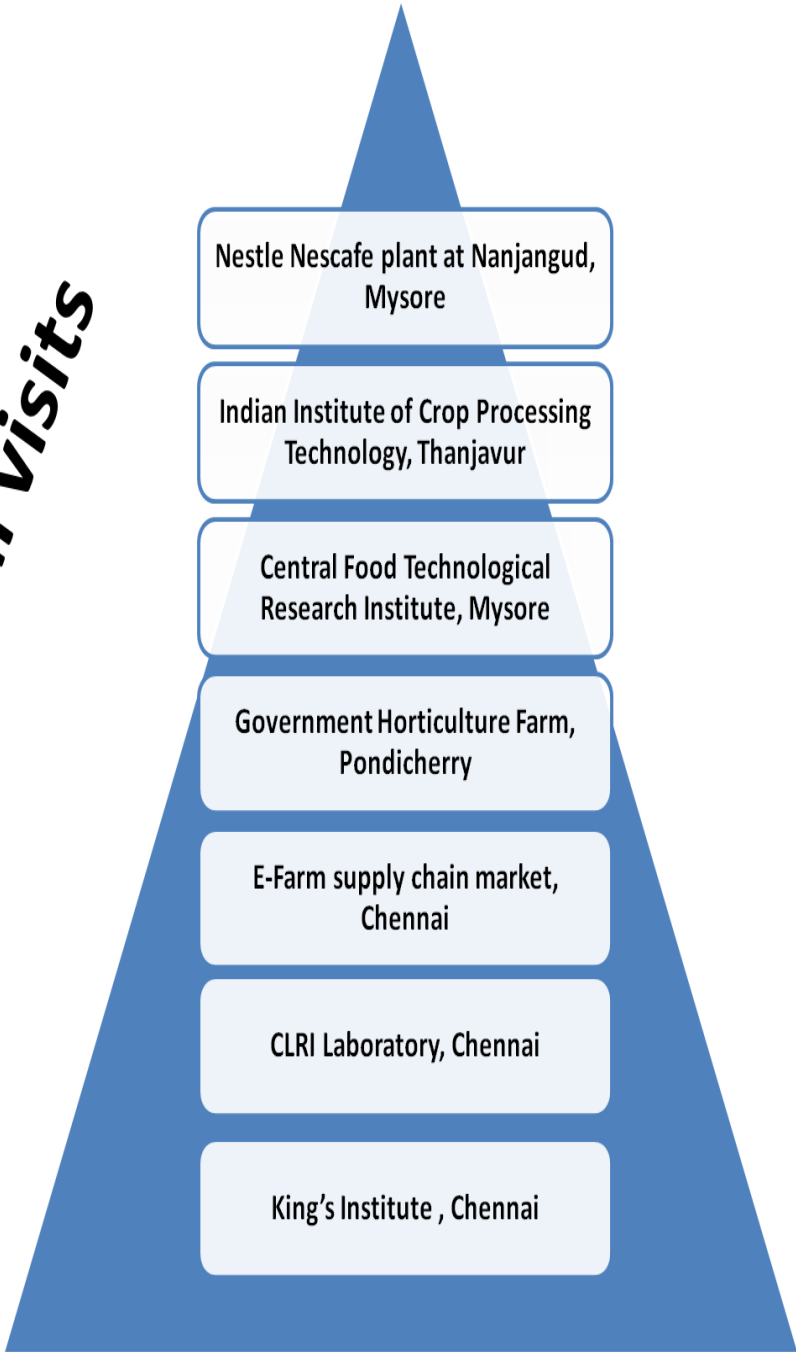
Department Activities

Research
Internships
Guest Lectures
Conference
Workshops
Field Visits
Placement





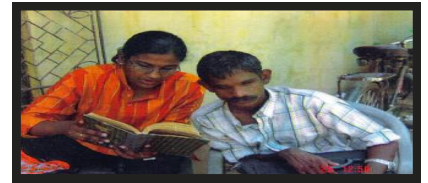
Industrial visits





Extension Activities of the Department

- Extension activities are carried out through MOPCRS@ 107.8—the college's Community Radio Station.
- Two DST sanctioned projects—Planet Earth and Science for Women's Health through the Community Radio have contributed towards spreading awareness about health and environment to the neighboring communities.
- Workshop for Self Help Group Women on setting up small scale entrepreneurial food business ventures
- **Health Awareness** – Awareness and detection camps were organized by the department on a range of health issues such as
 - Women's health
 - AIDS awareness
 - Cancer prevention
 - Nutrition awareness
 - Diabetes
 - Hygiene and Sanitation
- (Nearly **20,000 beneficiaries** from various areas in the city have benefited from these programmes).
- **Medical services** – Health camps such as Diabetes detection, Nutrition counseling, cataract detection camps were organized by the department for—Urban slums of Badrikkarai, Aalayamman Koil Street
- **Environmental awareness – Promotion of ideas** such as kitchen garden, distribution and planting of saplings are done among students of Government Middle school, Pudupakkam village, Tamil Nadu.
- **Service to the differently abled - Nutritional surveillance ,health promotion and training sessions were conducted for the mentally challenged and special children** of M.G.R., School for Deaf and Dumb, Ramavaram, Chennai.





Research Activities

Student research activities



Minor projects are carried out by the students and published in the department journal, national and international peer reviewed journals. Research findings are also presented at National and International conferences.

Research Publications:

- Usha Ravi, Lakshmi Menon, Aruna, M. and Jannani B.K. (2010) Development of Orange–White Pumpkin Crush and Analysis of its Physicochemical, Nutritional and Sensory Properties, *American–Eurasian Journal of Agriculture and Environmental Science*, 8(1) : 44-49.
- Usha Ravi, Lakshmi Menon, and Ranjani Madhavan (2010) Nutritional, Sensory and Physical Analysis of Pumpkin Flour Incorporated weaning mix, *Malaysian Journal of Nutrition*.
- Usha Ravi, Lakshmi Menon, and Anupama, M. (2010) Formulation and quality assessment of instant *dhokla* mix with incorporation of pumpkin flour, *Journal of Scientific and Industrial Research*, Vol 69 : 956-960.
- Usha Ravi, Lakshmi Menon, Anupama, M. , Jananni, B.K. and Akilandeswari, M.S. Analysis of rice grain quality of indigenous organic rice variety—*Kapakkar*. *Indian Journal of Agricultural Research In Print*
- Usha Ravi, Lakshmi Menon, Padmini K, Sangeetha V, Impact of Germination on Oligosaccharide content in select Asian Indian Minor Millets, *Agricultural Science Digest. In Print*.
- Usha Ravi, Lakshmi Menon, Gomathy M., Development and quality assessment of a blended crush with incorporation of plantain stem and grape juice, *Indian Journal of Natural Products and resources. In Print*



Salient Student Achievements

- *Ms. Yogitha K and Ms. Sumukhi Suresh* were members of the *SIFE (Students In Free Enterprise)* teams representing the college in 2006 and 2007 respectively.
 - *Ms. Sumukhi Suresh, Ms. Amrita Menon and Ms. Roshini V* won the *Business proposal presentation on 'Meals on Wheels'* conducted by the *Entrepreneurship Development Cell* of the college.
 - *Ms. Sindhu and Ms. Jenitha* won first place in the *new product concept competition* organised by *IFCON 2008* at *CFTRI, Mysore* for their *ready to make Tamarind Seed Starch –Badam Milkshake*.
 - *Ms. Shafiya Nousheen and Ms. Shravanthi* won the *second place* in the *new product concept competition* organised by *IFCON 2008* at *CFTRI, Mysore* for their *ready to eat product Hibiscus preserve*.
 - *Ms. Charumathy G.* of *M.Sc. Food Technology & Management* was awarded the *best student for the year 2009 – 2010* by the prestigious institution *Association of Food Scientists and Technologists (India)*.
 - *Ms. Lakshmi Shankarnarayan and Ms. Geetika Baid* of *M.Sc. Food Technology & Management* was awarded the *best student for the year 2010 – 2011* by the prestigious institution *Association of Food Scientists and Technologists (India)*.
 - *Students of M.Sc. Food Technology and Management* have presented a total of *20* research papers on *Food Technology, Processing and Marketing* during their period of study at various *International and National forums*.
 - *31 Research papers* were presented by the *undergraduate and postgraduate students* of *School of Food Science* at the *Indian Convention of Food Scientists and Technologists* organized by *Association of Food Scientists and Technologists (India)*
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- **16 Research papers** were presented by the undergraduate and postgraduate students of School of Food Science at the **International Conference on Traditional Foods** organized by **Department of Food Science and Technology Pondicherry University** in association with **Association of Food Scientists and Technologists (India) Pondicherry Chapter**.
- **33 Research papers** were presented by the undergraduate and postgraduate students of School of Food Science at the **International Conference on Food and Nutraceuticals for Nutritional and Health: Technology and delivery** organized by **Department of Food Science , Periyar University, Salem**.

Date	Name of student	Event	Organized by	Prize won
17.9.09 – 18.9.09	Roopavani.R	Research Paper Presentation	IICPT, Thanjavur & Pandit Jawaharlal Nehru College of Agriculture & Research Institute, Karaikal.	I
23.12.09	Sigapriya.P	Research Paper Presentation	Association of Food Scientists and Technologists of India, Mysore.	II
23.12.09	Gomathy.G	Research Paper Presentation	Association of Food Scientists and Technologists of India, Mysore.	Consolation Prize
09.02.10	Lakshmmi Prabha.T	Research Paper Presentation	Department of Biotechnology, Loyola College, Chennai	I
09.02.10	Lydia Mercy.S	Research Paper Presentation	Department of Biotechnology, Loyola College, Chennai	II
1.12.10- 3.12.10	Sahitya Lalitha Kameswari S., Santana Priyadarshni S.	Research Paper Presentation	Department of Food Science and Technology Pondicherry University, Association of Food Scientists and Technologists (India) Pondicherry Chapter.	I





Internships

Internships are structured such that the students are exposed to *food processing industries*. Some prominent places of internship identified include:



• Aavin	• Britannia Industries Ltd	• Nestle India Ltd.	• Farm Suzanne Pvt. Ltd.
• Hatsun Agro Foods	• Coca-Cola Pvt. Ltd.	• Pepsico	• Link Enterprises
• Amritha Ice creams	• Marico Industries Ltd.	• B-Naturals	• Lotte India Ltd. (Parrys Confectionaries India Ltd)
• Mega Foods	• Savorit Industries	• Cadbury's	• Central Food Technological Research Institute (CFTRI), Mysore
• McRennett (Elliot Foods Pvt. Ltd., Ginny Foods Pvt. Ltd.)	• E-farm	• Reliance Retail	• Quality Control Laboratories in Hotel Taj Coromandel, Taj Connemera, GRT Grand.
• Cookie man	• Cakes N' Bakes	• Modern Food Industries	• Mrs Bector's food specialities Ltd.

The first year undergraduate students of B.Sc. Food Science & Management are given a 100 hour summer training module on skill sets required to work as interns at Food Industries

Training component	Hours
Food safety and quality	15
Food Laws, regulations and standards	5
Training in product preparation and development	20
Quantitative and shelf life analysis of food samples	20
Product ideation, production, testing and launch	40
	100



What Next?

Graduates can be placed in food industries and food related sectors as —

- Food Microbiologist
- Food Analyst
- Food Quality Control Managers
- Food and Drug Inspector
- Food Packaging Managers
- Customer Relation Personnel
- Technical Sales Representative
- Food Consultant
- Food Production Manager
- Food Technologist
- Food Scientist

Higher Education

PG Diploma and Post Graduate Courses in

- Food Technology and Management
- Food Technology
- Food Science and Quality Control
- Food Bio Technology
- Foods and Nutrition

