

# **PROGRAMME GUIDE and PROJECT GUIDELINES**

**M. Sc. in Food Safety and Quality Management  
(MSCFSQM)**



**School of Agriculture  
Indira Gandhi National Open University  
New Delhi - 110068**

**YOU ARE GOING TO BE A DISTANCE LEARNER. TRY TO DEVELOP THE HABIT OF LEARNING THINGS BY WAY OF READING RELEVANT DOCUMENTS. LET THIS PROGRAMME GUIDE MAKE THE BEGINNING OF YOUR JOURNEY OF DISTANCE LEARNING.**

**This booklet contains relevant information in brief about the Programme on “M.Sc. in Food Safety and Quality Management (MSCFSQM)” and the entire admission and examination procedures.**

## **RECOGNITION**

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**The “M.Sc. in Food Safety and Quality Management” has been developed by the School of Agriculture, Indira Gandhi National Open University, New Delhi.**

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# Contents

S.No.	Title	Page No.
<b>1.0</b>	<b>The University.....</b>	<b>5</b>
1.1	Introduction.....	5
1.2	Prominent Features.....	5
1.3	The Schools of Studies.....	5
1.4	Academic Programmes .....	6
<b>2.0</b>	<b>School of Agriculture.....</b>	<b>6</b>
2.1	Programmes on Offer .....	7
<b>3.0</b>	<b>MSCFSQM programme .....</b>	<b>8</b>
3.1	Objectives of the programme.....	8
3.2	Eligibility for Admission .....	8
3.3	Medium of Instruction.....	8
3.4	Target Group.....	9
3.5	Duration .....	9
3.6	Programme Fee.....	9
3.7	Programme Structure.....	9
3.8	Syllabus of the Programme.....	9
<b>4.0</b>	<b>Instructional System .....</b>	<b>20</b>
4.1	Self Learning/Instructional Print Material.....	20
4.2	Audio-Video Materials .....	20
4.3	Academic Counselling Sessions.....	20
4.4	Teleconferencing .....	20
4.5	Interactive Radio-Counselling (IRC) .....	21
4.6	Study Centres/Programme Study Centres .....	21
<b>5.0</b>	<b>Assignments .....</b>	<b>22</b>
<b>6.0</b>	<b>Evaluation .....</b>	<b>24</b>
6.1	Evaluation Structure and modalities for Theory, Practical, Project Work, Seminar and Dissertation .....	24
6.2	Distribution of Marks .....	25
6.3	Pass Percentage for the Programme.....	26
6.4	Result and Certification .....	27
6.5	Term-End Examination (TEE) .....	27
6.6	Declaration of Results .....	28
6.7	Early Declaration of Results.....	28
6.8	Re-evaluation of Answer Script(s) .....	29
6.9	Issue of Official Transcript .....	29

6.10 Photocopy of the Evaluated Answer Script.....	29
<b>7.0 Guidelines for Project Work (MVPP-003 and MVPP-004) .....</b>	<b>29</b>
7.1 Objective .....	29
7.2 Approach .....	29
7.3 Project Synopsis (Proposal) .....	30
7.4 Eligibility for Project Supervisor .....	31
7.5 Project Synopsis Submission and Approval .....	31
7.6 Project Report .....	32
7.6.1 Managing the project time .....	32
7.6.2 Components of Project Report .....	32
7.6.3 Formulation .....	33
7.6.4 Submission of Project Report .....	33
7.6.5 Enquiries .....	33
7.6.6 Submission of Project Evaluation Marks.....	33
7.6.7 List of Topics .....	33
7.6.8 Project Report Evaluation Criteria.....	33
<b>8.0 Some Useful Information .....</b>	<b>39</b>
8.1 Some Useful Addresses .....	39
8.2 Online Facilities .....	40
8.3 List of Regional Centres and Study Centres for MSCFSQM Programme .....	42
8.3 Some Forms for Your Use .....	42
<b>APPENDIX</b>	
<b>I Evaluation Form No.1 to 4 .....</b>	<b>43</b>
<b>II Credit Transfer Form.....</b>	<b>48</b>

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## 1.0 THE UNIVERSITY

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### 1.1 Introduction

The Indira Gandhi National Open University has been established by an Act of Parliament in 1985 to achieve the following objectives:

- democratising higher education by taking it to the doorsteps of the learners;
- providing access to high quality education to all those who seek for it, irrespective of age, region or formal qualifications;
- offering highly quality, innovative and need-based academic programmes by giving professional and vocational orientation to the courses;
- promoting and developing distance education in India; and
- setting and maintaining standards in distance education in the country as an apex body.

### 1.2 Prominent Features

IGNOU has certain unique features such as:

- international jurisdiction;
- flexible admission rules;
- individualized study: flexibility in terms of place, pace and duration of study;
- use of latest information and communication technologies;
- an effective and integrated nationwide student support services network;
- cost-effective programmes;
- modular programmes based on credit system;
- socially and academically relevant programmes based on student's need analysis;
- resource sharing, collaboration and networking with conventional universities, open universities and other institutes/organizations; and
- convergence of open and conventional educational systems.

### 1.3 The Schools of Studies

The University has established twenty one Schools of Studies to plan, supervise, develop and organize its academic Programmes and courses in coordination with the different academic, administrative and service wings of the University. The Schools of Studies, established by the University, are as follows:

1. School of Agriculture (SOA)
2. School of Computer & Information Sciences (SOCIS)
3. School of Continuing Education (SOCE)
4. School of Education (SOE)
5. School of Engineering and Technology (SOET)
6. School of Extension and Development Studies (SOEDS)
7. School of Foreign Languages (SOFL)
8. School of Gender and Development Studies (SOGDS)
9. School of Health Sciences (SOHS)
10. School of Humanities (SOH)

11. School of Inter-disciplinary and Trans-disciplinary Studies (SOITS)
12. School of Journalism and New Media Studies (SOJNMS)
13. School of Law (SOL)
14. School of Management Studies (SOMS)
15. School of Performing and Visual Arts (SOPVA)
16. School of Sciences (SOS)
17. School of Social Sciences (SOSS)
18. School of Social Work (SOSW)
19. School of Tourism and Hospitality Service Management (SOTHSM)
20. School of Translation Studies and Training (SOTST)
21. School of Vocational Education and Training (SOVET)

#### **1.4 Academic Programmes**

The University offers a wide range of programmes both short-term and long-term leading to Certificates, Diplomas, Undergraduate Degrees, Postgraduate Degrees and Doctoral Degrees. Most of these programmes have been developed after an initial survey of the demand for such programmes. They are launched with a view to fulfill the learner's needs for:

- certification,
- improvement of skills,
- acquisition of professional qualifications,
- continuing education and professional development at work place,
- self-enrichment,
- diversification and updating knowledge; and
- empowerment.

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## **2.0 SCHOOL OF AGRICULTURE**

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The School of Agriculture (SOA) was established in 2005 with a mission to improve and sustain the quality of human life and productivity of agriculture and allied sectors through Open and Distance Learning System (ODL). It aims to improve out-reach of agriculture education for rural masses particularly in remote, ecologically and socio-economically marginalized areas through academic, continuing and extension programmes. The objective is to strengthen human resource base through quality education and generate an army of trained manpower in agriculture through ODL in consonance with the national policies and market environment. It also aims to produce entrepreneurial skills and opportunities for life-long learning. The School has developed programmes in collaboration with various national and international organisations like Ministry of Agriculture & Farmers Welfare, Ministry of Food Processing Industries, Department of Land Resources, Ministry of Rural Development, Agricultural and Processed Food Products Export Development Authority (APEDA) and Central Silk Board etc.

#### **Objectives**

- To strengthen the human resource in agriculture and allied sectors through ODL;
- To provide equitable quality education in agriculture to marginalized and disadvantaged groups;
- To enhance knowledge, skills and entrepreneurial capabilities for livelihood security;
- To use ICT for improving outreach and effectiveness of distance education in agriculture;

- To conduct research in emerging areas for effective technology transfer and adoption;
- To establish national and international linkages in agriculture education and knowledge management for sustainable development; and
- To develop and maintain an open repository of agricultural education resources.

## **2.1 Programmes on Offer**

- a) Ph D programme
  - 1) Ph.D. in Dairy Science and Technology (PHDDR)
- b) PG Programmes
  - 1) M. Sc in Food Safety and Quality Management (MSCFSQM)
  - 2) PG Diploma in Food Safety and Quality Management (PGDFSQM)
  - 3) PG Certificate in Agriculture Policy (PGCAP)
  - 4) PG Diploma in Agribusiness (PGDAB)
- c) Diploma Programmes
  - 1) Diploma in Value Added Products from Fruits and Vegetables (DVAPFV)
  - 2) Diploma in Dairy Technology (DDT)
  - 3) Diploma in Meat Technology (DMT)
  - 4) Diploma in Production of Value Added Products from Cereals, Pulses and Oilseeds (DPVCPO)
  - 5) Diploma in Watershed Management (DWM)
  - 6) Diploma in Horticulture (DHORT)
- d) Certificate Programmes
  - 1) Certificate in Organic Farming (COF)
  - 2) Certificate in Sericulture (CIS)
  - 3) Certificate in Water Harvesting and Management (CWHM)
  - 4) Certificate in Poultry Farming (CPF)
  - 5) Certificate in Beekeeping (CIB)
- e) Awareness Programmes
  - 1) Awareness Programme on Dairy Farming for Rural Farmers (APDF)
  - 2) Awareness Programme on Value Added Products from Fruits & Vegetables (APVPFV)

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## **3.0 M. SC. IN FOOD SAFETY AND QUALITY MANAGEMENT**

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Food Safety is a fundamental public health concern. Food safety has gained much importance since the enactment of Food Safety and Standards Act, 2006 which came into force in 2011. There is an acute shortage of professional to develop and implement science based standards and food safety systems including their harmonization with international standards. The enforcement of the act has created a good demand for the qualified food safety and quality professionals in various areas like food processing, food testing, food safety, food regulation, auditing, risk management, capacity building etc. The M.Sc. in Food Safety and Quality Management (MSCFSQM) programme is expected to meet the increasing human resource requirements for Food Safety and Quality Management professionals in the agriculture and food sectors.

A special feature of this programme is that this is a modular programme having exit option for learners (after successful completion of 1<sup>st</sup> year) in the form of PG Diploma in Food Safety and Quality Management (PGDFSQM) and lateral entry option for the PGDFSQM diploma holders directly to the second year of the M. Sc.

### **3.1 Objectives of the programme**

The M.Sc. in Food Safety and Quality Management (MSCFSQM) programme intends to:

- To develop qualified and competent human resource in the field of the food safety and quality management for regulators, industry, academic/research institutions, certifying and accreditation bodies, food trade, food testing and training
- To delve in depth on various aspects of food safety and quality management i.e. food standards, harmonization with global benchmarks, quality management systems, food analysis, instrumentation, risk analysis /management, traceability and auditing to transform the food ecosystem
- To nurture a positive and disciplined food safety culture among the professionals.
- To conduct research studies on emerging food safety issues and formulation of science based regulatory framework.

### **3.2 Eligibility for Admission**

- a) Graduation in Science/Tech in Food Safety and Quality Management/Agriculture/ Food Science/Food Tech/Engineering having chemistry and microbiology subjects/ Post Harvest Technology/ Home Science/ Life Science/Microbiology/ chemistry/ Biochemistry/ Biotechnology/Pharmacy/Medical Lab Tech/ Horticulture/ Dairy Technology/ Veterinary/ Fisheries/Medical/ Dental Sc./ Nursing/BAMS/ BHMS/Hotel Management and Catering etc.
- b) PG Diploma in Food Safety and Quality Management (lateral entry for 2nd year of M. Sc). These diploma holders should also have one of the qualifications mentioned at (a) . Who have completed 32 credits will also have to complete one additional project work/industrial training report//food testing lab training of 4 credits in the second year.

### **3.3 Medium of Instruction**

The M.Sc. in Food Safety and Quality Management (MSCFSQM) is offered by the University in English language only.

### **3.4 Target Group**

The prospective target groups for this programme are Science graduates in the related fields; Personnel interested to pursue career in food safety, quality control, food regulatory, food audit, etc.; Professionals working in food processing/quality assurance/ food testing/food safety regulatory authority; and food entrepreneurs.

### **3.5 Duration**

The MSCFSQM programme can be completed by a student in a minimum of **two** years time and in a maximum of **four** years time.

### **3.6 Programme Fee**

The programme fee for the M.Sc. programme is Rs. 26000/- (Total Fees). The student has to pay Rs. 13000/- in the First year and Rs. 13000/- in the Second year. After the 1st year, whether you pass/attempt



the first year examination or not, you can seek admission for the 2<sup>nd</sup> year by submitting the programme registration form with requisite programme fee within the re-registration schedule as notified by the University. Student needs to register in the MOOC on Novel Technologies for Food Processing and Shelf-Life Extension available in the SWAYAM platform in the 2<sup>nd</sup> year of MSCFSQM and has to apply for Credit Transfer of the same course to the MSCFSQM after successful completion of the MOOC course. For the lateral entry directly in the second year of the MSCFSQM, a student has to apply for the credit transfer of the PGDFSQM to the MSCFSQM programme and Credit Transfer Form is available at Appendix II.

### 3.7 Programme Structure

The M. Sc in Food Safety and Quality Management (MSCFSQM) is of total 72 credits (36 credits in first year and 36 credits in second year). It consists of courses as outlined in the following table:

#### First Year

Sl. No.	Course Code	Title of the Course	Nature of the Course	Credits: Theory+Practical=
1.	MVP-001	Food Fundamentals and Chemistry	Theory	4+0=4
2.	MVPI-001	Food Microbiology	Integrated (Theory+Practical.)	2+2=4
3.	MVP-002	Food Laws and Standards	Theory	4+0=4
4.	MVP-003	Principles of Food Safety and Quality Management	Theory	4+0=4
5.	MVP-004	Food Safety and Quality Management Systems	Theory	4+0=4
6.	MVPL-001	Food Safety and Quality Auditing	Practical	0+4=4
7.	MVPL-002	Chemical Analysis and Quality Assurance	Practical	0+4=4
8.	MVPP-003	Project Work-1	Project Work	0+8=8
		TOTAL		36

#### Second Year

Sl. No.	Course Code	Title of the Course	Nature of the Course	Credits: Theory+Practical=
1.	MVP-005	Food Toxicology and Public Health	Theory	4+0=4
2.	MVP-006	Food Biotechnology	Theory	4+0=4
3.	MVP-007	Emerging Trends in Food Technology and Safety	Theory	4+0=4
4.	MVP-008	MOOC on Novel Technologies for Food Processing and Shelf-Life Extension	Theory	3+0=3
5.	MVP-009	Research Methodology	Theory	4+0=4
6.	MVPS-001	Seminar	Seminar	0+1=1

7.	MVPP-002	Dissertation	Dissertation	0+16=16
8.	MVPP-004*	Project Work 2	Project Work	0+4=4
		<b>TOTAL</b>		<b>36 (40*)</b>

\* MVPP 004 is only for those students who have taken lateral entry directly in the second year of the MSCFSQM and completed only 32 credits in PGDFSQM. They have to undertake additional 4 credits of project work (Project work/industrial training report/food testing lab training) in the second year.

A student can exit the MSCFSQM program after successful completion of the first year courses and will be awarded PG Diploma in Food Safety and Quality Management (PGDFSQM).

### 3.8 Syllabus of the Programme

#### Course-MVP-001: Food Fundamentals and Chemistry (4+0)

Block	Block Title	Unit	Unit Title
1	Introduction to food science	1	Food Basics
		2	Food from Plant Sources
		3	Foods from Animal Sources
		4	Other Foods
2	Food Chemistry	5	Water
		6	Carbohydrates
		7	Proteins and Enzymes
		8	Lipids
		9	Vitamins and Minerals
		10	Food Additives
3	Food Analysis	11	Sampling Techniques of Food Products
		12	Physical and Chemical Analysis of Foods
		13	Instrumentation in Food Analysis
		14	Sensory Evaluation of Food Products
4	Food Processing and Preservation	15	Introduction to Food Preservation and Processing
		16	Food Packaging
		17	Waste Management in Food Processing Industry

#### Course-MVPI-001 : Food Microbiology (2+2)

Block	Block Title	Unit	Unit Title
1	Fundamentals of Food Microbiology	1	Introduction to Food Microbiology
		2	Food Contamination and Spoilage
		3	Food Borne Diseases
		4	Beneficial Roles of Micro-Organisms
2	Analytical Techniques in Microbiology	5	General Techniques of Detection and Enumeration of Micro-organisms in Food
		6	Screening and Enumeration of Spoilage Micro-organisms in Food
		7	Detection of Pathogens in Food
		8	Rapid Detection Technique for Food Micro-organisms
	Practical Manual	1	Introduction to the Basic Microbiology Laboratory Practices
		2	Cleaning and Methods of Sterilization
		3	Cultivation and Sub-culturing of Microbes
		4	Staining Techniques
		5	Standard Plate Count Method

		6	Direct Microscopic Examination of Foods
		7	Enumeration of Fungi (Yeasts and Molds)
		8	Assessment of Air using Surface Impingement Method
		9	Assessment of Surface Sterilization using Swab and Rinse Method
		10	Detection of Coliforms and Indicator Organisms (1) Most Probable Number
		11	Detection of Coliforms and Indicator Organisms (2) Confirmed and Completed Tests, Membrane Filter Techniques
		12	EXPERIMENT 12 Interpretation of Microbiological Data and its Inferences

### Course-MVP-002 : Food Laws and Standards (4+0)

Block	Block Title	Unit	Unit Title
1	Food Safety and Standard Act, Rules and Regulations	1	Food Safety and Standard Act, 2006
		2	Food Safety and Standards Rules and regulations - Standards
		3	Food Safety and Standards Rules and regulations, - Procedures
		4	Inspection and Audit
2	Global Scenario	5	Codex Alimentarius Commission (CAC)
		6	WTO Implications
		7	Other International Standard Setting Bodies
3	Export and Import Laws and Regulations	8	Export (Act)
		9	Export Regulations and Promotion Bodies
		10	Food Import and Quarantine Aspects
4	Other Laws and Standards Related to Foods	11	International regulatory bodies
		12	Other Laws Related to Food Products
		13	Voluntary National Standards: BIS and AGMARK
		14	National Agencies for Implementation of International Food Laws and Standards
		15	Food Labelling

### Course-MVP-003 : Principles of Food Safety and Quality Management (4+0)

Block	Block Title	Unit	Unit Title
1	Food Safety and Quality Management Systems	1	Introduction to Food Safety
		2	Food Safety System
		3	Total Quality Management
		4	Schedule 4 of FSSR
2	Risk Analysis	5	An Introduction to Risk Analysis
		6	Risk Management
		7	Risk Assessment
		8	Risk Communication
3	HACCP	9	History, Background and Structure of HACCP
		10	HACCP Prerequisites and Good Hygienic Practices
		11	Principles and Implementation of HACCP
		12	Case Studies on HACCP
4	Other Food Safety Practices	13	Good Agriculture Practices, Good Animal Husbandry Practices and Good Manufacturing Practices
		14	Good Retail Practices, Good Transport Practices and Nutrition Labelling
		15	Traceability Studies

### Course-MVP-004 : Food Safety and Quality Management Systems (4+0)

Block	Block Title	Unit	Unit Title
1	Management Systems, Auditing and Accreditation	1	Introduction to Management Systems
		2	Auditing
		3	Standardization and Accreditation
2	Quality Management System	4	ISO-9001:2015 - An Overview
		5	ISO-9001:2015 – Structure
		6	Clause wise Interpretation of ISO 9001:2015
		7	ISO 9001:2015- Case Studies
3	Food Safety Management Systems	8	ISO 22000:2018 - An overview
		9	Clause Wise Interpretation of ISO 22000:2018
		10	ISO 22000:2018 - Food Safety Plan
		11	ISO 22000:2018 - Case Studies
4	Laboratory Quality Management System	12	An Overview and Requirements of ISO 17025
		13	Requirements Specific to Food Testing Laboratories - Physical and Chemical Parameters
		14	Requirements Specific to Food Testing Laboratories - Biological Parameters
		15	General Topics: Related to Food Testing Laboratories
5	Retailer Standards	16	BRC Food and BRC/IOP Standards - An Overview
		17	International Food Standard (IFS)
		18	SQF 1000 and SQF 2000
		19	Global GAP and India GAP

### Course-MVPL-001 : Food Safety and Quality Auditing (0+4)

Practical Manual	1	Visit to a nearby Food Establishment
	2	GHP and GMP in a Food Factory a) Identifying the Key Focus Areas for GHP and GMP b) Identifying Gaps in its Implementation c) Closure Plans for Identified Gaps in a Food Factory/ Food Outlet
	3	Developing the Process Flow for the Food Establishment Including all the Inputs, Outputs and Interim Loops
	4	Development of Methodology (Decisions Trees) as per Clause 7.4.4 of ISO 22000 for a Food Establishment
	5	Developing FSMS (Module 1) a) Data Collection and Hazard Identification (Physical, Chemical and Biological) b) Hazard Analysis (Using FMEA Technique for Risk Assessment)
	6	Developing FSMS (Module 2) a) Development of OPRP (Operational Pre-requisite Programme) and Development of HACCP Plan (Critical Limits including Rationale for Limits), Monitoring Procedure, Correction and Corrective Measures) b) Managing Unsafe Product
	7	Developing FSMS (Module 3) a) Verification and Validation of Control Measures (OPRP and HACCP Plan) as per Codex Guidelines on Validation b) Emergency Situation, Preparedness and Response Plan c) Communication (External and Internal)
	8	Developing FSMS (Module 4): Traceability System as a Tool for, Recall/ Withdrawal (ISO 22005: 2007)
	9	Application of ISO 9001 Model a) Understanding Process Approach b) Defining Quality Policy and Objectives c) Correction, Corrective Action and Preventive Action d) Continual Improvement

		10	Food Laws (Module 1) Identification of Legal Requirements for following Food Groups/Products/Standards: a) Fruits and Vegetable Products b) Dairy products c) Meat and Meat Products d) Cereal/Pulses/Oil Seeds Products e) Fish and Sea Foods f) Ready to Eat Foods
		11	Food Laws (Module 2) Hygienic Requirements for Manufacturing Premises as Prescribed by Law
		12	Food Laws (Module 3) Design a Label for any Food Product
		13	Matrix Preparation to Find Correspondence between ISO 22000, HACCP Series and BRC and any other Related Standard (Food Retail Management-Basic Requirements)
		14	Understanding ISO 17025 Requirements for 9001 and Clause 8.3 in ISO 22000:2005
		15	Audit Planning a) Role and Responsibilities of Auditors and Lead Auditors and Pre-audit Information Required to Plan the Audit (Module 1) b) Preparation of an On-site Audit Plan that is Appropriate to the Audit Scope (Stage 1 and Stage 2) (ISO:22003 and 17021) (Module 2)
		16	Produce an Audit Checklist Including Salient Features of ISO 9001 and FSMS 22000 (Module 3)
		17	Document Review as per the Case Study (Module 4)
		18	Auditing (Module 5) a) Conducting the Opening Meeting and Closing Meeting (as per ISO: 19011) b) Establishing Qualification Criteria for Auditors and Lead Auditors (ISO 17021 and ISO 22003 for a Food Industry)
		19	Mock Audit Exercise to Develop Interpersonal Skills Information Gathering Techniques and Exercising Objectivity in the Review of Evidences Collected (Module 6)
		20	Post Audit Activities (Module 7) a) Report Writing, including Writing Valid, Factual and Value adding Non-conformity Report b) Proposals for Corrective Action and Follow Up

### Course-MVPL-002 : Chemical Analysis and Quality Assurance (0+4)

Practical Manual	1	Calibration of Glassware
	2	Preparation of Standard Volumetric Solutions
	3	Determination of Moisture in Food Products by Hot Air Oven-drying Method
	4	Determination of Moisture in Food Products Using Karl Fischer Titration Method
	5	Determination of Moisture in Food Products by Dean and Stark Method
	6	Determination of Protein Content in Food Products by Kjeldahl Method
	7	Determination of Crude Fat in Foods by Soxhlet Extraction Method
	8	Determination of Total Fat in Foods by Rose Gottlieb Method
	9	Determination of Volatile Oil in Spices
	10	Determination of Starch in Cereal Grains by Acid Hydrolysis Method
	11	Determination of Starch in Cereal Grains by Glucoamylase Method
	12	Determination of Crude Fibre in Food Sample
	13	Determination of Total Ash Content in Food Products
	14	Determination of Acid Insoluble Ash in Food Products
	15	Determination of pH of Food Products by Using pH Meter
	16	Determination of Free Fatty Acids and Acid Value in Oils and Fats
	17	Determination of Unsaponifiable Matter in Oils and Fats
	18	Determination of Melting Point or Solidification Point of Oils and Fats
	19	Determination of Refractive Index of Oils and Fats
	20	Determination of Specific Gravity of Oils and Fats
	21	Determination of Titre Value of Oils and Fats

	22	Determination of Colour of Oils and Fats by Lovibond Tintometer
	23	Determination of Iodine Value in Oils and Fats
	24	Determination of Saponification Value in Oils and Fats
	25	Determination of Acetyl Value and Hydroxyl Value in Oils and Fats
	26	Determination of Allyl Isothiocyanate in Mustard Oil
	27	Determination of Reichert Meissl (RM) Value and Polenske Value (PV) in Oils and Fats
	28	Determination of Peroxide Value of Oils and Fats
	29	Determination of Sodium Chloride Content in Butter
	30	Determination of Gluten Content in Wheat Flour
	31	Determination of Sorbic Acid in Food Products
	32	Determination of Copper, Zinc, Lead and Cadmium in Food Products by Atomic Absorption Spectroscopy
	33	Determination of Cholesterol Content in Ghee by GC
	34	Determination of Vitamin A Content in Ghee by HPLC
	35	Sensory Evaluation Laboratory
	36	Selection of Sensory Panelists
	37	Sensory Evaluation of Food Products–Hedonic Rating Test
	38	Judging of Milk

### Course-MVPP-003 : Project Work 1 (0+8: Project work)

- a) **Objective:** Study implementation of GHP/ HACCP/ QMS/FSMS in Food Establishments. This could be undertaken in establishments like: Manufacturing, Hospitality, Retail and Street food hawkers. The suggestive list of topics is as follows:

#### List of Suggestive Topics

1. Study on effective implementation of correction, corrective action and preventive actions as per QMS in an organization.
2. Study on implementation of process approach as required by QMS in a organization.
3. Study of GHP of street food hawkers (Minimum 4 hawkers in one location) and report the recommendations for implementation.
4. Study of GMP in different food industries (organized and unorganized) in different food groups.
5. Development of Training Modules for workers on GMP & GHP.
6. Development of Training Modules for middle management : Internal Audit and concept and Implementation of HACCP.
7. Study on compliance to legal and customer requirements related to food safety and hygiene in a Food establishment.
8. Study on appropriate CCP identification for a food establishment as required by ISO 22000 clause 7.4.4.
9. Study on CCP Monitoring, corrective actions and verifications in a food organization and propose improvement.
10. Food Safety and Standards Act: Study of existing food laws versus Food Safety and Standards Act 2006.
11. Study on different emergency situations affecting food safety in a food establishment and propose mitigation plan.
12. Study on Internal communication in an organization for ensuring compliance to 22000 clause 5.6.
13. Study on External communication in an organization for ensuring compliance to 22000 clause 5.6.
14. Study on effective cleaning of equipment/machinery (food contact surfaces including food gloves) in a food establishment.

15. Study on hygienic practices at raw material suppliers' premises and recommendations for improvement.
  16. Study on suitability of packaging material at various stages of processing (raw, intermediate and finished product) as per prescribed standards.
  17. Study on compliance to labeling requirements for domestic and imported food items (minimum four different category of products).
  18. Study on repeatability and reproducibility of testing methods and results in an organization.
  19. Designing an ideal plant layout for a food establishment related to food safety.
  20. Study on calibration techniques of instruments in food industry, food laboratories and CCP monitoring.
  21. Study on Waste (liquid and solid) Management in a food establishment.
  22. Study on Pest Management in a food establishment.
  23. Study on existing versus idealistic process for identification, Traceability and withdrawal (recall) as per ISO 22000 and ISO 22005.
  24. Study on method adopted for finalizing/establishing shelf life of a product (against declared/claim).
  25. Study on allergens, intolerants (e.g Lactose) and their control in a food products.
- b) **Guidelines:** The guidelines for synopsis and project preparation are given in the Chapter 7 of this Programme Guide please.

## **2<sup>nd</sup> YEAR COURSES**

### **Course MVP-005: Food Toxicology and Public Health (4+0 credits)**

Block	Block Title	Unit	Unit Title
1	Introduction to Food Toxicology	1.	Basics of Food Toxicology
		2.	Biological Factors Influencing Toxicity
		3.	Determination of Toxicants in Food & Types of Toxicological Studies
		4.	Adverse Reactions to Food & Food Adulteration
2	Toxicants from Natural & Man-made Sources & Contaminants	5.	Natural Toxins from Plant, Animals, Marine Sources
		6.	Pesticide Residues in Food, their Toxicology & Safety
		7.	Heavy Metals and Contaminants in Foods
		8.	Veterinary Drugs & Antibiotic Residues in Foods and their Safety
3	Derived Food Toxicants	9.	Toxicants Generated from Processing and Packaging
		10.	Food Additives and Nutraceuticals Toxicology
		11.	Microbial & Fungal Toxins in Food and Food Poisoning
4	Food Safety and Public Health	12.	Public Health Risks related to Food
		13.	Case Studies related to Food Hazards
		14.	Epidemiology
		15.	Surveillance of Food Borne Diseases

### **Course MVP-006: Food Biotechnology (4+0 credits)**

Block	Block Title	Unit	Unit Title
	Basics of food Biotechnology	1.	Introduction to Food Biotechnology
		2.	Recombinant DNA Technology
2	Food Fermentation	3.	Food Fermentation Technology
		4.	Applications of Food Fermentation Technology-1
		5.	Applications of Food Fermentation Technology-2
3	Application of Biotechnology in Food Production	6.	Biotechnology and Food Ingredients - I
		7.	Biotechnology and Food Ingredients - II
		8.	Food applications of Enzymes
4	Advances in Food Biotechnology	9.	Application of Genetics to Food Production
		10.	Protein Engineering in Food Technology
		11.	Bioremediation
5	Challenges in Food Biotechnology	12.	Biotechnology for Food Security and Safety
		13.	GMOs and GM Food

### **Course MVP-007: Emerging Trends in Food Technology and Safety (4+0 credits)**

Block	Block Title	Unit	Unit Title
1	Advanced Technologies and Food Safety	1.	Novel Processing Technologies and Food Safety
		2.	Functional Food, Nutraceuticals, Supplements and Nutrigenomics
2	Emerging Trends in Food Microbiology	3.	Issues in Food Microbiology
		4.	Predictive Microbiology for Food Safety



3	Technological Advances in Food Safety	5.	Novel packaging Technologies and Food Safety
		6.	Nanotechnology and Food Safety
		7.	Biosensors in Food Safety
		8.	Applications of Biosensors in Food Safety
4	Advances in Food Analysis	9	Non Invasive Food Analysis
		10	Molecular Tools for Detection of Food Pathogens
		11	Other Advanced Techniques
5	Trends and Challenges in Food Safety	12	Food Fraud and its Mitigation
		13	Entrepreneurship
		14	Digital Transformation

### Course MVP-008: Novel Technologies for Food Processing and Shelf-Life Extension (0+3 Credits)

(MOOC offered by **Prof. Hari Niwas Mishra** | IIT Kharagpur)

- Week 1** : Introduction to food processing, preservation and quality; Basic principles & methods, water activity vs. food stability, structure-function relationship.
- Week 2** : Chemical changes in food during processing; Browning reactions (enzymatic and non-enzymatic), protein interactions, carbohydrate interactions.
- Week 3** : High pressure processing and Membrane technologies in food processing.
- Week 4** : Food irradiation, RF & microwave heating; Super critical fluid extraction.
- Week 5** : Food extrusion technology, RTE snack foods, Textured vegetable protein, Rice and dal analogues.
- Week 6** : Hurdle technology concept, Natural antimicrobials & bacteriocin; Freeze drying.
- Week 7** : Controlled atmosphere storage of food grains; ozone, microwave treatment for disinfestation of grains; Detection of spoilage in grains.
- Week 8** : Modified atmosphere packaging, Active packaging, and Edible coating of fruits & vegetables.
- Week 9** : Extraction and processing of oil; Mechanical expellers, solvent extraction, refining, hydrogenation, winterization.
- Week 10** : Shelf life extension of oils using natural antioxidants; Concept and measurement of rancidity.
- Week 11** : Microencapsulation of bioactive, and Technology of oil powder.
- Week 12** : Functional foods and Nutraceuticals, Ready-to-eat therapeutic food, micronutrient fortified high energy bar, gluten free bread, carbonated cereal beverage.

### Course MVP-009: Research Methodology (0+4 credits)

Block	Block Title	Unit	Unit Title
1	Science and Scientific Approach	1.	Selection of Research Problem
		2.	Review of Literature
		3.	Concept and Variables, Formulation and Testing of Hypothesis
2	Research Designs	4.	Research Design
		5.	Descriptive and Survey Research
		6.	Experimental Research

3	Data collection, Sampling, Tests and Measurements	7.	Levels of Measurement
		8.	Knowledge Test Construction
		9.	Data Collection
		10.	Sampling Technique
4	Data Analysis and Reporting	11.	Quantitative Techniques
		12.	Qualitative Techniques
		13.	Statistical Analysis and Packages
		14.	Report Writing

**Course-MVPS-001 : Seminar (0+1 credit)**

The student can choose any topic related to any of the courses studied in two years of MSCFSQM and has to present the seminar in the study centre as the oral presentation.

**Course-MVPP-002 : Dissertation (0+16 credits)**

The dissertation shall be carried out under the supervision of the supervisor/guide appointed to each learner by the programme incharge/coordinator at the respective programme study centre or approved by the Programme Coordinator, School of Agriculture. The dissertation can be done at study centre/programme study centre, food testing laboratory or in the food industry/establishment. The student can select any topic related to emerging issues in the area of food safety and quality management. After completing the dissertation (thesis), the report is to be submitted to the Regional Centre for Evaluation. For Dissertation work, details are given in the Dissertation Manual for MVPP-002.

**Course-MVPP-004 : Project Work 2 -- (0+4 credits)**

This is for the lateral entry students who have taken admission with 32 credits PGDFSQM. The guideline is same as for the course MVPP 003.

## **M.Sc. in FOOD SAFETY AND QUALITY MANAGEMENT (MSCFSQM)**

### **Consolidated Information about MSCFSQM**

- 1. Name of the Programme:** M.Sc. in Food Safety and Quality Management
- 2. Programme Code:** MSCFSQM
- 3. Eligibility:**
  - a) Graduation/Post Graduation in Science with Chemistry/Bio-chemistry or Microbiology as one of the subjects.
  - b) Graduation/Post Graduation in allied sciences like Agriculture/Food Science/Food Technology/Food & Nutrition/Engineering having chemistry and microbiology subjects/Post Harvest Technology/Home Science/Life Science/Microbiology/Biochemistry/Biotechnology/Horticulture/Dairy Technology/Veterinary/Fisheries/Medical/Dental Sc./Nursing/BAMS/BHMS/Hotel Management and Catering/ Hospitality Management etc.
  - c) PG Diploma in Food Safety and Quality Management (lateral entry for 2<sup>nd</sup> year of M. Sc). These diploma holders should also have one of the qualifications mentioned at (a) and (b). They will also have to complete one additional project work/industrial training report/food testing lab training of 4 credits in the second year.
- 4. Minimum age as on 1st July of the Academic Year:** No Bar
- 5. Duration in years:**
  - a) Minimum: 2 year
  - b) Maximum: 4 year
- 6. Programme Fee:** Rs. 26000/- (Total Fees); First year: Rs. 13000/-; Second year: Rs. 13000/-
- 7. Medium of Instruction:** English

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## 4.0 INSTRUCTIONAL SYSTEM

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The instructional system of IGNOU is more learner-oriented and learner-centred; and the student is an active participant in the teaching and learning process. The University follows multimedia approach in imparting instruction to its learners. The instructional system of MSCFSQM also follows multi-media approach i.e. self-instructional print material, audio-video programmes, assignments, counseling sessions, teleconferencing, interactive radio counseling, project and dissertation work.

### 4.1 Self Learning/Instructional Print Material:

The printed study material for both theory and practical components of the Programmes is given to the students. This MSCFSQM programme consists of 15 courses (theory, practical, project, seminar and dissertation). The study material is self-instructional in nature and its theory courses are divided in booklets called Blocks. Each theory block contains three-four chapters which are called units. These units of each block have a certain thematic unity and arranged in a related logical sequence to maintain the continuity of learning of the particular subject. Further, the first block of each course starts with the course introduction followed by a brief introduction to the block. Each unit has an introduction dealing with the contents of the units. Each unit outlines a list of objectives which we expect you to achieve working throughout the unit. This is followed by the main body of the unit, which is divided into various sections and sub-sections. We end up each unit by summarizing its contents to enable you to recall the main points. The “Check Your Progress” exercises given in each unit are meant to help you to assess your understanding of the subject.

The practical manual is divided into a number of experiments and has been structured to facilitate self-guidance during the practical counseling sessions. There is also a project guideline to help you to complete your project work.

### 4.2 Audio-Video Materials :

The learning package contains audio and video programmes which have been produced by the University for better clarification and enhancement of understanding of the course material given to the student. A video programme is normally of 25-30 minutes duration. The audio tapes are run and video cassettes are screened at the study centres during the hours of the counselling sessions. The video programmes are also telecast on Gyan Darshan and Swayam Prabha channel. Similarly, the audio programmes are also broadcast by Gyan Vani and selected stations of All India Radio. Learners can contact study centres for further information. The video programmes can be seen at the following link <https://www.youtube.com/user/ignousoa/videos>.

### 4.3 Academic Counselling Sessions:

Academic counseling sessions will be quite different from the usual classroom teaching. These would not be in the form of lectures. These sessions would give an opportunity to have interaction with your peers and academic counsellors. Normally, counselling sessions are held as per a schedule drawn by the Programme In-charge of the study centre allotted to you. The counselling sessions are mostly held on weekends (Saturday and Sunday). There will be counseling sessions for both the theory and practical components. The main purpose of such theory counseling sessions is to clarify your doubts pertaining to different aspects of a course and answer to your questions. You must study the self learning material and try to assimilate it, prior to coming for counselling. Whatever problems are faced with, you must consult your counsellor for clarifications and help. During the counselling sessions, there will be ample opportunity to interact with fellow students which will help you to formulate self-help groups. There will be 25 theory counselling sessions (2 hours each) and, 50 Practical counselling sessions (4 hours each) in the first year of the programme. In the second year, there will be 25 theory counselling sessions (2 hours each). The participation in practical session is an integral and compulsory part of the M.Sc programme. The practical component of the programme has been designed to explain the theory text and provide hands-on-experience to do the practicals. This will help you to improve your skills, knowledge and competence that you will need to practice as a competent food safety professional. The attendance in theory counseling is not compulsory, but 75% attendance in the practical counseling sessions is compulsory for becoming eligible to appear in the Term-End Examinations.

### 4.4 Teleconferencing:

Tele conferencing sessions are conducted through interactive Gyan Darshan Channel from the University studios as per the schedule made available to the Regional and Study Centres. Tele conferencing is an effective

means of interaction between the learners and the experts. The current status of the channels and teleconferencing sessions are available on the IGNOU website. The programme can also be viewed from IGNOU website <http://gd.ignouonline.ac.in/gyandarshan/>

#### **4.5 Interactive Radio-Counselling (IRC):**

Interactive Radio-Counselling (IRC) is being broadcast by Gyan Vani stations to enable the students to interact with the faculty, academic counsellors and students support staff. The detailed schedule can be accessed at IGNOU-EMPC website. The IRC is also available through the University's website <http://gd.ignouonline.ac.in/gyandhara/>. You can ask questions right from your home through telephone by availing the facility of toll-free telephone number provided for this purpose or using the gyandhara link.

#### **4.6 Study Centres/Programme Study Centres:**

To provide effective support, IGNOU has set up a large number of Study Centres (SC)/Program Study Centres (PSC) all over the country. Considering your place of residence or work, you will be allotted one of these SC/PSCs. However, each Study Centre can handle only a limited number of students, it may not always be possible to allot you the Study Centre of your choice. The detailed particulars regarding the Study Centres to which you are assigned, will be communicated to you by the concerned Regional Centre after confirmation of your admission. Please visit [www.ignou.ac.in](http://www.ignou.ac.in) to have the list of Study Centres activated for MSCFSQM program. The counselling sessions are coordinated by the Programme Incharge who is your contact person at the study centre. The theory and practical counselling sessions of the programme will be held at the study centre. Major support for academic and other related matters would be provided at your Study Centre(s)/Program Study Centres.

##### **Major Functions of the Study Centres/ Programme Study Centres (PSC)**

- **Counselling:** Face-to-face counselling for the courses will be provided at the Study Centres/Programme Study Centres. Generally there will be theory and practical counselling sessions for the entire programme at the selected Programme Study Centre. The detailed programme of the counselling sessions will be prepared by the Program Incharge/Coordinator of the Study Centre.
- **Library:** For each course a set of suggested books will be available in the Study Centre library. The students can refer these books during the working hours of the Study Centre.
- **Information and Advice:** At the Study Centre, you will get relevant information regarding the courses offered by the university, counselling schedule, examination schedule, etc. You will also get guidance in submitting various forms from time to time.
- **Interaction with Fellow-Students:** In the Study Centres, the student gets an opportunity to interact with fellow students.
- **Telecounselling Facility:** Some of the Programme study centres are equipped with the teleconference reception facilities. You can participate in telecounselling session at your study centre.
- Your study centre/Programme Study centre will organize the Induction Programme for the newly enrolled students, where in the students are oriented about the open and distance education system in general and about the MSCFSQM program in particular. You will be interacting with the officials from the Regional Centre, Academic Counsellors from the Study Centre. A brief overview would be given about the structure of the programme; instructional system; academic counselling; assignments; various components of assignments and evaluation system. Please note that Induction Meeting/Programme is a very important programme, which is organized only once for you, on enrolling for the first time. As such, you must attend the programme, without fail. Distribution of Academic Counselling schedule will be done by the SC/PSC.
- You will have to submit your assignments at the SC/PSC and the evaluated assignments with marks and feedback would be returned to you by the SC/PSC.

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## 5.0 ASSIGNMENTS

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Assignments constitute an integral component of this programme. You are given certain course wise problems/questions for writing assignments. You are advised to write your response for these assignments based on your understanding of Self Learning Material pertaining to course, discussions and interactions you have had with academic counsellors, and fellow learners. Each course will have one assignment. You are required to submit assignment responses of every course at the Study Centre (SC/PSC) allotted to you within the stipulated time frame.

Course-wise questions for assignments prepared by the faculty are sent to you along with the study material. It can also be downloaded from the IGNOU website i.e. available at <https://webservices.ignou.ac.in/assignments/>.

You are given enough time to go through the study material, refer books, discuss/interact with Academic Counsellors and fellow learners to develop an understanding and comprehending before you attempt actual assignment response preparation. After completing the assignments, you should submit the same to the SC/PSC for assignment evaluation and feedback. The evaluator will evaluate the assignment response and provide you feedback in the form of teaching comments on the strengths and weakness of each of the assignment response for your benefit. Remember, the assignment carry a weightage of 30% per course, which will be added to the final grade in the concerned course.

Please make sure that you **write assignment responses on your own which will improve your understanding, knowledge and skills about the course curriculum**. At the same time, you are also advised not to reproduce the course material given in the units or assignments responses of others. Any learner, found indulging into such practice, may be penalized by awarding “Zero mark”. Your sincere efforts in writing assignment responses will enable you to integrate your knowledge, understanding, and skills and provoke you to think on your own to test your comprehension of content and competencies in applying the concept.

### Steps to be followed for Assignment Preparation

While writing assignment responses, you may follow the guidelines given below which will facilitate for preparing better assignment responses:

- Read assignment question very carefully and identify the block(s) unit(s) to which it relates.
- Make your answer precise, concise and systematic, which is relevant to assessment question.
- Supplement your response with examples, illustrations and real life situations, as per requirement, which will help you in acquiring better knowledge and skill.
- Stick to the word limit, if indicated, in the assignment, by drafting, re-drafting assignment responses till you arrive a final draft response.
- Remember, you have to write answer in your own handwriting, as such, do not send typed assignment response.

Further guidelines, if required, may be obtained from your Academic Counsellor(s) attached with the Study Centre/ Programme Study Centre.

### Submission of Completed Assignment Responses

Always submit your assignments within the specified time limit. Please read carefully the instructions given in the assignment.

- Write your enrolment number, name and full address at the right hand corner of the 1<sup>st</sup> page of your assignment response.
- Submit your assignment response only to your SC/PSC.
- The course for which the assignment has been done, its Course code should be written in capital letters in the centre of the top of the 1<sup>st</sup> page of the response sheets. The top left hand corner should be kept for office use.

- The format given below may be used:

Programme Code .....

Programme Title .....

Course Title .....

Course Code .....

Enrolment No .....

Name: .....

Address: .....

Telephone .....

E-mail: .....

Date of Submission: .....

### **Instructions for submitting/sending Assignment Responses**

- Send assignment responses complete in all respect. Incomplete assignments will not carry any credit.
- Use-A-4 size paper for writing your response and leave a margin of about 2½ inch on the left side for writing tutor comments and providing feedback.
- Always retain a copy of the assignment response with you as a precautionary measure. In case the assignment response submitted is lost in transit or otherwise, you may be asked to send another copy. As such, retain a photocopy of the assignment response till you successfully complete the Programme.
- The assignment should be submitted to the Coordinator/Programme-Incharge of the Study Centre/ PSC on or before the last date indicated, as per the schedule of assignments, given by the University.
- Always procure a set of new assignment questions, which are on offer if you have not cleared them in previous year(s).

Once you have obtained pass marks in an assignment, you cannot resubmit assignment response, for improvement of grade/mark. Assignments are not subject to re-evaluation except for factual errors, if any.

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## 6.0 EVALUATION

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In Indira Gandhi National Open University, every course is considered as an independent unit. Hence, every course will be evaluated separately and for all purposes each course will be considered as a separate entity. There are fifteen courses in the "**M.Sc in Food Safety and Quality Management**" programme comprising, nine theory courses (MVP-001, MVP-002, MVP-003, MVP-004, MVP-005, MVP-006, MVP-007, MVP-008 and MVP-009), one integrated course (MVPI-001), two practical courses (MVPL-001 and MVPL-002), one project work (MVPP-003), one seminar (MVPS-001) and one dissertation (MVPP-002). For successful completion of the programme, you will have to secure pass marks in all the fifteen courses. The assessment system of the programme is given below:

### 6.1 Evaluation Structure and modalities for Theory, Practical, Project Work, Seminar and Dissertation

- i. **Theory:** For theory, the weightage to the term-end examination (Final Theory Examination) will be 70% and for continuous assessment (assignment) it will be 30%. The continuous assessment is in form of Assignments. There will be one assignment for each theory and integrated course.

**Term-End Examination: 70% and continuous assessment: 30%**

The examination shall be held twice in a year i.e. June and December.

- ii. **Practical:** The practical evaluation shall be for one integrated course (MVPI-001) and two practical courses (MVPL-001 and MVPL-002). The practical evaluation is divided under two components: (i) guided experiments and (ii) unguided experiments. The guided experiments shall be performed during the counselling sessions under the guidance of the counsellors. The unguided experiment shall be undertaken by the students in the last session. For unguided experiment, student shall not be provided any guidance while performing the experiment(s). Both the components will be evaluated.

**Guided Experiments: 70% and Unguided Experiments: 30%**

Each experiment performed by the student would be evaluated. The student performance would be assessed by the counsellors covering various aspects like manipulative skills, observation and their understanding of the basic concepts related to the experiment.

For **guided experiments**, the students will be evaluated by the counsellor for performing the experiments. For a particular experiment, split up of marks may be broadly on the following lines:

S. No.	Component	Weightage
a)	Actual performance of experiment and observation (psychomotor and manipulative skills)	40%
b)	Reporting (Problem solving skills)	20%
c)	Viva-voce	20%
d)	Record	20%

Evaluation of **Unguided Experiments** will be conducted in the last session of the laboratory work. The student should not be provided any guidance while performing this experiment. For this experiment 30% marks are allotted, split up of marks may be broadly on the following lines:



S. No.	Component	Weightage
a)	Actual performance of experiment and observation (psychomotor and manipulative skills)	50%
b)	Reporting (Problem solving skills)	25%
c)	Viva-voce	25%

There shall be one internal examiner and one external examiner. The counsellor conducting the practical counselling sessions for the course shall be the internal examiner. The external counsellor could be either one of the counsellor from the same study centre or other study centre or an approved external examiner. The course-writer/editors/faculty members of the SOA could also act as external examiners.

iii. **Project Work:** The project work evaluation involves preparation of project report and its weightage is 100%. The marks are to be awarded by the evaluators. The detail guidelines are given in the section marked for the project work i.e. MVPP-003.

The criteria for project report evaluation include: (1) Task Definition and Approach (25% weight), (2) Literature Review, Findings and Evaluation (50% weight), and (3) Communication of Ideas and Presentation (25% weight).

iv. **Seminar:** You will have to present the seminar in the study centre/program study centre and it will be evaluated on the basis of your oral presentation (100% weightage).

v. **Dissertation:** The dissertation evaluation will involve preparation of dissertation report and its weightage is 100%. The criteria for dissertation report evaluation include: (1) Task Definition and Approach (25% weight), (2) Literature Review, Findings and Evaluation (50% weight), and (3) Communication of Ideas and Presentation (25% weight).

The detail guidelines are given in the dissertation manual (MVPP 002).

## 6.2 Distribution of Marks

Every course is considered as an independent unit. The maximum marks for each course (theory/ practical/ integrated) shall be 100. The integrated course MVPI-001 shall have 50 marks for theory and 50 marks for practical. The course wise distribution of marks is given below in the table.

### Total and Course-wise Distribution of Marks

Course Code	Theory		Practical		Project/ Dissertation/ Seminar	Total Marks Obtained out of 100
	Term-end	Continuous Assessment	Guided	Unguided		
<b>1<sup>st</sup> Year</b>						
MVP-001	70 (28)	30 (12)	00 (00)	00 (00)	00 (00)	100 (40)
MVPI-001	35 (14)	15 (6)	35 (14)	15 (6)	00 (00)	100 (40)
MVP-002	70 (28)	30 (12)	00 (00)	00 (00)	00 (00)	100 (40)
MVP-003	70 (28)	30 (12)	00 (00)	00 (00)	00 (00)	100 (40)
MVP-004	70 (28)	30 (12)	00 (00)	00 (00)	00 (00)	100 (40)
MVPL-001	00 (00)	00 (00)	70 (28)	30 (12)	00 (00)	100 (40)

MVPL-002	00 (00)	00 (00)	70 (28)	30 (12)	00 (00)	100 (40)
MVPP-003	00 (00)	00 (00)	00 (00)	00(00)	100 (40)*	100 (40)
<b>2<sup>nd</sup> Year</b>						
MVP-005	70 (28)	30 (12)	00 (00)	00 (00)	00 (00)	100 (40)
MVP-006	70 (28)	30 (12)	00 (00)	00 (00)	00 (00)	100 (40)
MVP-007	70 (28)	30 (12)	00 (00)	00 (00)	00 (00)	100 (40)
MVP-008	75 (30)	25 (10)	00 (00)	00 (00)	00 (00)	100 (40)
MVP-009	70 (28)	30 (12)	00 (00)	00 (00)	00 (00)	100 (40)
MVPS-001	00 (00)	00 (00)	00 (00)	00 (00)	100 (40)*	100 (40)
MVPP-002	00 (00)	00 (00)	00 (00)	00(00)	100 (40)*	100 (40)
MVPP-004**	00 (00)	00 (00)	00 (00)	00(00)	100 (40)**	100 (40)
<b>Total</b>	<b>670(268)</b>	<b>280 (112)</b>	<b>175(70)</b>	<b>75 (30)</b>	<b>300 (120)</b> <b>400 (160)**</b>	<b>1500 (600)</b> <b>1600 (640)**</b>

\* Project Report/Dissertation Report/Seminar

\*\* Project Work in the second year for lateral entry students with 32 credits PGDFSQM

*The marks in bracket indicate minimum pass marks.*

*For exit with PGDFSQM, the student needs to complete 1<sup>st</sup> year courses only.*

Formats for sending the practical and project marks by the SC/PSC are given in the Appendix 1 (Evaluation Form No. 1 to 4)

### 6.3 Pass Percentage for the Programme

The students will have to secure minimum 40% marks in all the components of the course on individual basis as well as on aggregate basis for the course i.e. (i) term-end examination (ii) assignment; (iii) practical (total marks obtained in guided and unguided experiments), (iv) project work, (v) Seminar, (vi) dissertation and (v) on aggregate basis.

### 6.4 Result and Certification

The final certification of the M.Sc. programme shall be made on a five point scale and Grade point average as approved by the University vide Item No. 19.6 of the Academic Councils Standing Committee is as follows:

Letter Grade	Point Grade	Range	% of Marks	Division
A	5	4.50 and above	80% and above	1st Division with Dist.

B	4	3.50 to 4.49	60% to 79.9%	1st Division
C	3	2.50 to 3.49	50% to 59.9%	2nd Division
D	2	1.50 to 2.49	40% to 49.9%	Pass
E	1	0 to 1.49	Below 40%	Failed

## 6.5 Term-End Examination (TEE)

The University conducts Term-end Examination twice in year in the month of June and December. The first examination can be taken in June/December, after completion of one year, depending upon the cycle of admission i.e. July/January. In other words, student admitted in January session will be eligible to take first term-end examination in December and those admitted in July session can take exam in next June. Thereafter, the examination can be given in June or December, within the total span of the programme. To be eligible to appear at the term-end examination in any course, students are required to fulfill the following conditions:

- 1) Should pursue the prescribed course and should have valid registration at the time of submission of examination form. Further, maximum time to pursue the programme has not elapsed.
- 2) Should complete 75% of attendance in practical courses/ practical counselling sessions.
- 3) Should submit the examination form before stipulated date.
- 4) Should have submitted all the assignments of various courses.

Students should submit on-line examination form as per guidelines through IGNOU website at [www.ignou.ac.in](http://www.ignou.ac.in). **For the latest information** regarding Programme fee, Exam fee, Late fee etc., you are requested to visit the IGNOU website.

**About last date of form fill up and the examination fee, please visit the University website.**

### i) The date of submission of Examination form without late fee:

For June TEE : 1<sup>st</sup> March to 31<sup>st</sup> March

For December TEE : 1<sup>st</sup> September to 30<sup>th</sup> September

### ii) Examination forms with late fee are accepted as per following schedule:

#### Dates for Submission of Exam Form

FOR JUNE TEE	LATE FEE	FOR DEC TEE	LATE FEE
1 March to 31 March	NIL	1 Sept. to 30 Sept.	NIL
1 April to 20 April	₹ 300/-	1 Oct. to 20 Oct.	₹ 300/-
21 April to 30 April	₹ 500/-	21 Oct. to 31 Oct.	₹ 500/-
1 May to 15 May	₹ 1000/-	1 Nov. to 15 Nov.	₹ 1000/-

**Examination Centre:** A student is required to fill the exam centre code in the examination form. For this purpose the students are advised to go through the list of exam centres available. In case the examination centre chosen by a student, is not activated, the university will allot another examination centre under the same District/Region. Please remember that the University reserves the right for allocation of the Examination Centre.

**Issue of Examination Hall Ticket:** University issues Examination Hall Ticket to the students at least two weeks before the commencement of Term-end Examination. It could be downloaded from the University's website [www.ignou.ac.in](http://www.ignou.ac.in). Change of examination centre is permitted only in exceptional cases for which you have to make a request to the Registrar, SED at least one month before the commencement of the examination as per the University norms.

**Always remember your Enrolment Number is your Roll Number for the term-end-examination (theory paper). Please exercise enough care in writing it correctly. Any mistake in writing the Roll Number will lead to non-declaration of result.**

If you do not get the Hall Ticket, check the list of students registered for examination at the Examination Centre or on the IGNOU website [www.ignou.ac.in](http://www.ignou.ac.in). If your name is in the list, you shall be permitted to appear at the examination by showing your Identity Card (Student Card)/downloaded Hall Ticket to the Examination Centre Superintendent.

## **6.6 Declaration of Results**

Although all efforts are made to declare the result in time. The University may not be able to declare the results of the last examination before commencement of next examination, however, due to unforeseen/unavoidable reasons.

You are, therefore, advised to fill up the term-end examination form for next term-end examination without waiting for the result of previous term-end examination.

Always quote your name, Enrollment Number, name of the programme and complete address for any correspondence with the University (including Regional Centre and Study Centre). In absence of such details, we may not be able to attend to your problems.

No student is allowed to re-appear in an examination or re-submit assignment responses for improving the marks/grade after successfully completing it.

## **6.7 Early Declaration of Results**

The University has the provision of early declaration of term-end examinations results. The application for early declaration of results shall be entertained only if you have been selected for any post or applied for further studies, wherein mark-sheet/certificate for qualifying examination is required to be submitted to the institution by a particular date, which may be before the date of declaration of the University results. You must compulsorily submit documentary evidence (proof) in support of the reason for early declaration of your result.

It may be noted that early declaration of result is allowed only in respect of theory courses. **This facility is not applicable for practical/lab courses, project, workshop, assignments, seminar, etc. based courses. The application for early declaration of results shall be entertained for final year courses or maximum of four backlog courses only.** Prescribed fee shall be paid for early result declaration. Application form along with required amount of fee must be submitted to the Registrar, S.E. Division, IGNOU, Maidan Garhi, New Delhi-110068 before the date of the commencement of term-end examination i.e., before 1<sup>st</sup> June and 1<sup>st</sup> December, respectively. The link for Early Declaration of Results is placed in this book.

## **6.8 Re-evaluation of Answer Script(s)**

The students who are not satisfied with the marks/grade secured by them in Term-end Examination can apply for re-evaluation within one month from the date of result declaration i.e. the date on which the results are made available on the University website on payment of the prescribed fee as per the prescribed application form available on the University website. The better of the two scores of original marks/grades and re-evaluated marks/grades will be considered and the revised marks/grades shall be incorporated in the student's records, if applicable. Re-evaluation is not permissible for Projects, Practicals, Assignments and Seminars, etc.

## 6.9 Issue of Official Transcript

The students may also obtain 'Official Transcript' for submission to the Overseas or Indian Institutes/ Universities on request. They may apply in the prescribed form by paying the requisite fee.

A sample prescribed application form with rules and regulations in detail for this purpose is given in the Common Prospectus and also made available at <http://www.ignou.ac.in/ignou/studentzone/forms/> 1 on University's website [www.ignou.ac.in](http://www.ignou.ac.in).

## 6.10 Photocopy of the Evaluated Answer Script

The students may obtain the photocopy of the evaluated answer scripts for the term-end examination on request. They may apply the prescribed application form from 1<sup>st</sup> March to 15<sup>th</sup> April for June Term-end Examination and from 1<sup>st</sup> September to 15<sup>th</sup> October for December Term-End Examination along with the requisite fee.

A sample prescribed application form with rules and regulations in detail for this purpose is given in the Common Prospectus and also made available at <http://www.ignou.ac.in/ignou/studentzone/forms/> 1 on University's website [www.ignou.ac.in](http://www.ignou.ac.in).

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## 7.0 GUIDELINES FOR PROJECT WORK (MVPP-003 and MVPP- 004)

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### *MVPP-003: PROJECT WORK 1 and MVPP -004: PROJECT WORK 2*

The project course MVPP-003 is an integrated part of the M.Sc in Food Safety and Quality Management (MSCFSQM). The purpose of the project work is to sensitize you to the realities and practices of Food Safety and Quality Management at field (floor) level. The project means here a type of action oriented research with planning and designing elements as well. It is also an opportunity for you to critically look into any specific issue / problems that you might have faced or you are currently facing at your work place. For registration purpose, the project course is treated as one course. The students who have taken lateral entry in the second year of MSc with a 32 credits PGDFSQM, they should follow the same guidelines of MVPP-003 for doing additional project work i.e. MVPP 004.

### 7.1 Objective

The objective of the project is to develop capabilities, among the students, for a comprehensive analysis of implementation of Good Hygienic Practices/ HACCP/ Quality Management System/ Food Safety Management System in a food establishment. The objective also includes enabling you to conduct investigation in a systematic way and to expand your understanding on the subject.

### 7.2 Approach

The students may undertake any topic studied in the seven courses of the M Sc. In Food Safety and Quality Management. The broad themes for study could include:

- Good Hygienic Practices/ HACCP/ Quality Management System/ Food Safety Management System
- Development of Training modules
- Food Laws & Standards
- Analysis of Food Products

**The project work may be undertaken in a food manufacturing/processing (organized/unorganized), hospitality, retail & street food unit. The project should not be a theory/literature based exercise. It should be practice oriented.**

The types of project may include: (a) Comprehensive case study (problem formulation, analysis and recommendations), (b) comparison of practices/ validation of theory/ survey of quality management

practices and (c) field study (empirical study). The project should be challenging but manageable within the resources and time available.

An outline of your project proposal from your end in form of synopsis will initiate a dialogue between you and your supervisor who will then help you to work on the chosen topic and report.

### 7.3 Project Synopsis (Proposal)

**Proposal Formulation:** Synopsis of the project should be prepared. The synopsis should clearly state the objectives and research methodology, sampling, instruments to be used, limitations if any, and future direction for further research.

- a) **Identification of Topic:** The selection of topic is of crucial importance. It should be decided and based on your understanding of the study, experience in the field and interest. The topic should be discussed with the supervisor. It should be in harmony with your areas of interest and the specialization of the supervisor. It is always better to identify a micro topic to remain focussed and complete the project on the time and within the budget and resources. The topic should be clear, directional, focussed and feasible.
- b) **Development of Project Synopsis:** The synopsis should be around 500 words. The synopsis should consist of:
  - i) a clear statement of the topic of the project;
  - ii) a statement of objectives (what you intend to achieve through the project);
  - iii) your hypothesis (if any) on which you build your study;
  - iv) the methodology you intend to adopt to carry out your study – tools and techniques to be used, if any;
  - v) population and sample size proposed, if the project involves any field work; and
  - vi) implications of the project for food safety & quality Management.

The statements of the topic and of the hypotheses are closely related. You state your hypotheses based on your present knowledge about the topic. Your hypotheses may be proved correct or changed later, based on the analysis of the data you collect. Your hypotheses also can be in the form of few research questions.

When you set objectives, it is better to limit them to four or five. A large number of objectives will be difficult to achieve, given the present scope of the project and the time available to us. The objectives should be achievable and measurable.

Methodology should include the ways through which you would collect your information, data, etc., and analyse them.

You need not worry much about the implications of your project at the initial stage. You need to state, however, in general terms the purpose of your project. Implications and conclusions will be stated more specifically and concretely towards the end of your actual Project Work.

In addition to the above steps your proposal may also include relevant literature/ studies, and Time/ Schedule, listing various activities you have to carry out in the project, time needed for each activity and resources you have to spend on them. This time schedule will help you to carry out your project work in a systematic way.

- c) **Submission:** The Synopsis of the project should be sent to **the Concerned IGNOU Regional Centre (RC) only**. The concerned RC will give the Project Synopsis Number and shall inform the student about its approval.

#### **7.4 Eligibility for Project Supervisor:** The following are eligible to be supervisor:

- i) Faculty at the Headquarters (School of Agriculture).
- ii) Academic Counsellors of Food Safety & Quality Management Programme having relevant experience.
- iii) Teacher in Agriculture having 5 years of PG teaching experience in areas related to disciplines, e.g. in food processing, food analysis, good agricultural practices, food safety and quality management, etc. / Professionals holding Masters' degree in Food technology or allied disciplines having a minimum of 5 years of experience in the relevant area. (In exceptional cases, a supervisor with a B.E. degree and 5 years of relevant experience may also be approved)

#### **7.5 Project Synopsis Submission and Approval**

Students are advised to send their project synopsis and bio-data of the supervisor (in case of (ii) and (iii) above, which must be duly signed by the guide) to the concerned Regional Centre (RC). Synopsis proposals not accompanying a complete and signed Bio- Data of supervisor will not be considered for approval. Project synopsis can be submitted throughout the year. The concerned Regional Centre will forward the original synopsis approval to the student.

In case the proposed supervisor is not acceptable to the Faculty, the student shall be advised so, and in such cases the student should change the supervisor and resubmit the proposal. Hence the student will submit project proposal afresh with the signature of the new supervisor, as it will be considered as a new proposal. Similarly if a student wants to change his/her supervisor for any reason, he/she would be required to submit the project proposal alongwith the signature of the new supervisor on a new project proposal proforma, as it would be considered as a new proposal.

In case of academic counsellors, it should be clearly mentioned as to which are the course he/she is counselling for, and since when, alongwith the name and code of the study centre, he/she is attachedwith. The project supervisor will be paid a token honorarium as per the University norms for guidingthe student.

**At any given point of time a supervisor can not guide more than six students.**

**Note:** Student are advised to select supervisors who are active professionals in the relevant area of the selected topic. Project Supervisors are also advised to restrict guiding projects in their core specialization area only.

**Communication of Approval:** A written communication regarding the approval/ non- approval of the project will be sent to the student by the Regional centre.

**Resubmission of Project Proposal:** In case of non- approval of the proposal the comments/suggestions for reformulating the project will be communicated to the student. In such case the revised project synopsis should be submitted with revised project proposal proforma and a copy of the rejected synopsis and project proposal proforma bearing the comments of the evaluator and P.P. No. (Project Proposal Number) allotted by the concerned Regional Centre (RC).

## 7.6 Project Report

### 7.6.1 Managing the Project Time

As you are aware, the project work-1 (MVPP- 003) is worth 8 credits or 240 study hours and project work 2 (MVPP-004) is worth 4 credits or 120 study hours. We suggest you manage your time according to the following guidelines.

Activity	MVPP-004		MVPP-003	
	Time (Hours)	Days	Time (Hours)	Days
Identification of project and finalizing project proposal in consultation with project counselor and field guide	32	4	64	8
Planning and conducting project work in the field with periodic review by project counsellor and field guide	56	7	112	14
Analyzing observation/results and writing the project report	32	4	64	8
<b>Total</b>	<b>120</b>	<b>15</b>	<b>240</b>	<b>30</b>

### 7.6.2 Components of Project Report

The Project Report may be presented in accordance with the following outline:

- i) **Introduction:** What prompted you to choose the topic? How is the topic important from Food Safety and Quality Management point of view?
- ii) **Objectives:** Specific and lucid statement of what you wish to achieve through the project.
- iii) **Review of literature:** The work done in the area be reviewed for reference.
- iv) **Methodology:** This may contain:
  - a) **Design:** A statement on what your overall plan of action is.
  - b) **Sampling:** How did you go about selecting the specific object, events or respondents you selected for study?
  - c) **Tools/ Techniques:** What instruments, devices, material or techniques did you choose for collecting your data?
  - d) **Processing and Analysing Data:** What techniques you did use to process the data which you collect and analyse them to answer your question?
- v) **Analyses and Findings:** A lucid presentation (numerical or graphical wherever necessary) of the analysed data and the interpretations you make thereof.
- vi) **Suggestions and Action live:** Recommendations/ suggestions and action live with people who are to perform them be specified.
- vii) **Conclusions:** The insights you have gained through this exercise, and how these may help in understanding the concept and promoting the principles and practices of food safety and quality management on the whole.
- viii) **Bibliography and Appendices.**
- ix) **Approved Project Proposal.**



### 7.6.3 Formulation

The following guidelines may facilitate formulation of the Report

- i) The length of the report may be about 80-100 double spaced typed pages for MVPP -003 and 50 to 60 double spaced typed pages for MVPP-004 (excluding appendices and exhibits). However 10% variation on either side is permissible.
- ii) Each project report must adequately explain the research methodology adopted and the directions for future research.
- iii) The project report should also contain the following:
  - a) Copy of the Approved Project Synopsis (Proposal) Proforma and Synopsis
  - b) Certificate of originality duly signed by the student and the supervisor

### 7.6.4 Submission of Project Report

One typed copy of the project report is to be submitted to the Regional Director (RD) of the concerned Regional Centre (RC). As soon as you submit the Project Report, a P.R.No. would be allotted which will be communicated to you. You should quote this P.R.No. while corresponding with the concerned Regional Centre regarding Project Report.

**Project Report can be submitted any time throughout the year. Students are requested to kindly note that the “Project Report submitted after 30<sup>th</sup> November to till 31<sup>st</sup> May will be counted for June Term-End and Project Report submitted after 31<sup>st</sup> May to till 30<sup>th</sup> November will be counted for December Term-End”.**

The project evaluation shall be conducted from the approved panel of evaluators.

### 7.6.5 Enquiries

**Enquiries regarding the approval of Project Synopsis should be addressed to the concerned Regional Director, IGNOU Regional Centre, IGNOU.**

### 7.6.6 Submission of Project Evaluation Marks

The Regional Centre shall forward the Project Report marks as per evaluation methodology to the **Registrar, Student Evaluation Division (SED), Block-12, Indira Gandhi National Open University, Maidan Garhi, New Delhi - 110068** for further processing as per university norms. The format for sending project report marks is given at Appendix I.

### 7.6.7 List of Topics

**An illustrative list of topics, is already given at the Section 3.8, under Syllabus of the Programme,** to give you an idea as to what kind of topics could be selected for project work. It is however, advised that the students select their topics outside this list.

### 7.6.8 Project Report Evaluation Criteria

#### 1. Task Definition and Approach (25% weight)

- a) Objectives/ rationale: Precise statement of objectives with rationale which outlines and refer to the underlying principles in the academic literature providing a clear theoretical frame for the project work.
- b) Approach/ process: Specification of methodology/ process, justification of choice of approach, its appropriateness, evidence of clear planning, organization and administration, and references to research methods literature.

## 2. Literature Review, Findings and Evaluation (50% weight)

- a) Literature Review: Development of a clear conceptual framework to underpin the study including rationale based on summary of findings of previous studies.
- b) Analysis: Evidence of analysis to support ideas, objectives and questions raised in the literature.
- c) Synthesis/evaluation: Concerned with the linking of different strands of arguments together. It includes the learner's ability to compare and contrast, synthesize and evaluate, and integrate issues raised in the literature and in the project through objectives and data gathered.
- d) Conclusion/recommendations: Relevant/ feasible and clear conclusion and recommendations that flow out of the analysis. Shows evidence of transfer of knowledge from the study to new situations.
- e) Creativity/ reflection: Evidence of the ability to take a position and defend it on the basis of data collected; Reflection on the implications of the study and suggestions on areas for further research.

## 3. Communication of Ideas and Presentation (25% weight)

- a) Coherence of argument: Clarity of arguments with supporting evidence from literature or data, and clear flow of ideas.
- b) Format and language: Written in an academic style – predominantly 3<sup>rd</sup> person; clear and correct usage of English; and adherence to aesthetic presentation of tables and diagrams.

### 7.6.9 Pass Percentage

*The pass percentage is 40% on individual and on aggregate basis please.*

#### ***SOME IMPORTANT NOTES WHILE PREPARING THE PROJECT SYNOPSIS (PROPOSAL)***

- 1) *Send only one copy of the Project Proposal, and retain a copy with you.*
- 2) *"MVPP-003" or MVPP-004" should be written prominently on the envelope and should address to the "Regional Centre".*
- 3) *Ensure the inclusion of the following while submitting the Proposal:*
  - a) *Proforma for Approval of Project Proposal duly filled and signed by both, the student and the supervisor.*
  - b) *Details Bio-Data of the supervisor duly signed by him/her. (Bio-data of the guide should include his/her detailed office address with phone numbers.*
  - c) *Synopsis of the Project*
  - d) *Ensure that the Project Proposal is not a Theory/Literature-based exercise. It should be action research/practice-oriented exercise to be undertaken.*
- 4) *The synopsis of your Project Proposal should include the following Rationale:*
  - a) *Introduction and Rationale for the study*
  - b) *Objectives of the study*
  - c) *Research Methodology to be used for carrying out the study (detailing nature of data, data sources, collection methods, tools and techniques of analysis, sampling etc.)*
  - d) *The expected contribution from the study*
  - e) *Limitations, if any, and the direction for future research.*

***SOME IMPORTANT NOTES WHILE PREPARING THE PROJECT REPORT***

1. *The Project Work should be submitted in original in A-4 size (29x20 cm) typed in double space, in a bound volumes to the concerned Regional Centre (RC) of the University by Registered insured post.*
2. *Before binding the project report the student should ensure that it contains the following in original.*
  - i) *Approved Project Proposal Proforma*
  - ii) *Approval Synopsis alongwith the Bio-data of the of the guide, and*
  - iii) *An originality certificate duly signed by the student and supervisor (Proforma enclosed)*

*If any Project Report is received in the absence of the above, the same will returned to the students for compliance.*

- 3) *Kindly mentioned on the top of the envelope “PROJECT REPORT-MVPP-003 or MVPP-004 (as the case may be). This will facilitate sorting out project report. The project report will not be returned to the student. The students should keep a copy of the report for their reference propose.*

***CERTIFICATE OF ORIGINALITY***

*This is to certify that the project titled “\_\_\_\_\_” is an original work of the Student and is being submitted in partial fulfillment for the award of the M Sc in Food Safety & Quality Management of Indira Gandhi National Open University. This report has not been submitted earlier either to this University or to any other University/ Institution for the fulfillment of the requirement of a course of study.*

***SIGNATURE OF SUPERVISOR***

***SIGNATURE OF STUDENT***

***Place:***

***Place:***

***Date:***

***Date:***

Project Synopsis No. \_\_\_\_\_

MSCFSQM Programme

(To be assigned by the concerned Regional Centre)

**SCHOOL OF AGRICULTURE  
INDIRA GANDHI NATIONAL OPEN UNIVERSITY  
Maidan Garhi, New Delhi - 110068**

**PROFORMA FOR APPROVAL OF PROJECT PROPOSAL**

*Enrolment No.....*

*Study Centre.....*

*Regional Centre.....*

*Name and Address of the Student : .....*

*Email & Mobile No. : .....*

*Title of the Project : .....*

*Subject Area : .....*

*Name and Address of the Supervisor : .....*

*Is the Supervisor an Academic Counsellor: Yes.....No .....*

*of Food Safety & Quality Management Programme of IGNOU ?*

*If Yes, Name and code of Study : .....*

*Centre and the courses he/she is .....*

*Counselling for and since when .....*

*No. of the student currently working : .....*

*Under the supervisor for .....*

*Signature of Student*

*Signature of Supervisor*

*Date:*

*Date:*

*Please do not forget to enclose the synopsis of the project and the Bio-data of the Supervisor. In case the complete and signed Bio-Data of the Supervisor (Even if the proposed supervisor is an academic counselor of IGNOU's Food safety and Quality Management Programme) is not enclosed, the proposal will not be entertained.*

<i>SYNOPSIS</i>	<i>SUPERVISOR</i>
<i>APPROVED</i>	<i>APPROVED</i>
<i>NOT APPROVED</i>	<i>NOT APPROVED</i>

*For Office Use Only*

*Signature of Evaluator/RC Official*

*DATE :.....*

*The remuneration bill has to be submitted after or alongwith the submission of the Project Report.*

**SCHOOL OF AGRICULTURE  
INDIRA GANDHI NATIONAL OPEN UNIVERSITY  
Maidan Garhi, New Delhi - 110068**

**REMUNERATION BILL FOR GUIDANCE OF PROJECT WORK**

1. *PROGRAMME TITLE* : *M. Sc in Food Safety and Quality management*
2. *COURSE TITLE* : *MVPP- 003 or 004.....*
3. *NAME OF SUPERVISOR* : .....
4. *RESIDENTIAL ADDRESS* : .....  
.....
5. *DESIGNATION* : .....  
.....
6. *OFFICIAL ADDRESS* : .....  
.....  
.....
7. *TELEPHONE NO.* : *OFF :* *RES :*  
*& Email* : *Email ID.*

<i>S.NO.</i>	<i>PROJECT</i>	<i>ENROLMENT NO.</i>	<i>NAME OF THE STUDENT</i>	<i>AMOUNT</i>

***Certified that I have guided the students for their Project Work***

*Please Affix  
Rev.*

***Date:*** ***Signature of the Supervisor***\_\_\_\_\_

***Note: The remuneration payable for guidance of Project Work is Rs. ..../- per student***

***Certified that the above Project Supervisor was approved and recommended by the concerned Regional centre and the above may be admitted.***

***Dy. Registrar/Asstt. Registrar***

***Section Officer***

***Dealing Assistant***

## 8.0 SOME USEFUL INFORMATION

### 8.1 Some Useful Addresses

For your information, addresses of important officers dealing with different educational aspects are given below. Whenever you have a problem, you can directly contact the concerned officer. **If you have any query regarding admission procedures, please write to Regional Director of your region.**

#### WHOM TO CONTACT FOR WHAT

1.	Identity Card, Fee Receipt, Bonafide Certificate, Migration Certificate, Scholarship Forms	Concerned Regional Centre
2.	Non-receipt of study material and assignments	Concerned Regional Director or MPDD, IGNOU
3.	SED Registrar's Secretariat	Contact No. Phone No: 011-29535828/ 2482 Intercom No. 2204/2205 FAX No.011-29534429 sed@ignou.ac.in
4.	Original Degree/Diploma/Verification of Degree/Diploma	Deputy Registrar (Exam-I), SED, Block-9, IGNOU, Maidan Garhi, New Delhi-110 068 e-mail: convocation@ignou.ac.in Ph. 011-29535438, 29572224, 29572213
5.	Schedule/Information regarding Exam- form, Entrance Test, date-sheet, IGNOU, Hall Ticket	Assistant Registrar ( <b>Exam-II</b> ), Student Evaluation Division (SED), Block-12, Room No. 2, IGNOU, Maidan Garhi, New Delhi-110 068 e-mail: sgoswami@ignou.ac.in Tele No. 011-29536743, 29572202, 29572209
6.	Result, Re-evaluation, Grade Card, Provisional Certificate, Early Declaration of Result, Transcripts	Deputy Registrar ( <b>Exam-III</b> ), SED, Block-12, Room No. 1, IGNOU, Maidan Garhi, New Delhi-110 068 e-mail: npsingh@ignou.ac.in or Ph. 011-29536103, 29572201, 29572211, 29571525
7.	Non-reflection of Assignment Grades/ Marks	Assistant Registrar (Assignment), Student Evaluation Division, Block-3, Room No. 12, IGNOU, Maidan Garhi, New Delhi-110 068 e-mail: assignments@ignou.ac.in or Ph. 011-29532294, 29571312, 29571319, 29571325
8.	Change of elective/medium/opting of left over electives/deletion of excess credits	Concerned Regional Centre
9.	Student Grievances (online)	Assistant Registrar (Student Grievance) SED, Block-3, Room No. 13, IGNOU, Maidan Garhi, New Delhi-110 068 e-mail: sregrievance@ignou.ac.in Ph. 011-29532294, 29571313

10.	Purchase of Audio/Video Tapes	Marketing Unit, EMPC, IGNOU, Maidan Garhi, New Delhi-110 068 Ph. 011-29573210
11.	Academic Content	Director, School of Agriculture, Zakir Hussain Bhawan, Academic Complex, Block-G, IGNOU, Maidan Garhi, New Delhi-68 Ph. 011-29533167, 29572976, 29534773 e-mail: soa@ignou.ac.in
12.	Information Regarding Counselling Sessions & Assignment Submission	Concerned study centres and Programme Study Centre
13.	Status of Project Report	Phone No: Intercom No. 1324/1320/1321 E-mail: projects@ignou.ac.in
14.	Student Support Services and Student Grievances, pre-admission inquiry of various courses in IGNOU	Regional Director, Student Service Centre, IGNOU, Maidan Garhi, New Delhi-110068 e-mail: ssc@ignou.ac.in Ph. :011-29535414, 29533869 Fax: 011-2953 3129
15.	Front Office (May I help you) (Students' General Enquiries) IGNOU Telephone Exchange Number	Phone No:011-29572218, 2210/ 2211/ 2208/ 2216/ 2209 29571000
16.	Public Information Center (PIC)	PH: 29533715, 29572508

IGNOU admissions are made strictly on the basis of merit. Only those learners who satisfy the eligibility criteria fixed by the University will be admitted. Learners will not be admitted if they are not eligible as per the eligibility criteria. Therefore, the candidates should not be misled by the false promises of admission made by any private individuals or institution.

You are also advised to get in touch with the Programme Incharge of your Study Centre.

## 8.2 Online Facilities

IGNOU website is [www.ignou.ac.in](http://www.ignou.ac.in). A few important links under the site are enlisted here.

- Schools:** Where you will get the information about the programmes offered by different Schools. In the School of Agriculture, programmes being offered in agriculture sector are available.
- For students:** The University's website ([www.ignou.ac.in](http://www.ignou.ac.in)) has a special section marked as "StudentZone" to facilitate various student support services, from admission to results, to the students and covers-registration details, queries about admission, re-registration, results; catalogue for print media and audio video; download facilities for assignment; library; question papers; material dispatch details, address checking; registration for SMS alerts; convocation; term-end date sheet; examination form; campus placement and prospectus and application form. The students are requested to access the Student Zone of the IGNOU website- [www.ignou.ac.in](http://www.ignou.ac.in). The link is <http://www.ignou.ac.in/ignou/studentzone>

For SMS alert you can register at <https://admission.ignou.ac.in/changeadmdata/UpdateMobile.asp>

- Division:** Under this section, there are links of Material Production and Distribution Division, Regional Service Division, Student Registration Division and Student Evaluation Division.
  - Student Registration Division- This link will give you information about admission and re-admission. <http://admission.ignou.ac.in/changeadmdata/AdmissionStatusNew.ASP>

- ii) Student Evaluation Division- This link give information about term-end examination, grade card status, results, hall ticket etc.  
<http://www.ignou.ac.in/ignou/studentzone/results/2>
- iii) **MPDD:** The link <http://www.ignou.ac.in/upload/price%20catale.pdf> and [registarmppdd@ignou.ac.in](mailto:registarmppdd@ignou.ac.in) / [mpdd@ignou.ac.in](mailto:mpdd@ignou.ac.in) gives the price catalogue of the study material.
- iv) **Electronic Media:** You will get the information about the Gyan Darshan Schedule, Gyan Vanischedule, Interactive Radio Counselling, teleconferencing schedule and feedback form. Please check with [empc@ignou.ac.in](mailto:empc@ignou.ac.in) / [directorempr@ignou.ac.in](mailto:directorempr@ignou.ac.in) or [edusat-empr@ignou.ac.in](mailto:edusat-empr@ignou.ac.in)

### 8.3 List of Regional Centres and Study Centres for MSCFSQM Programme

1. IGNOU website: <http://www.ignou.ac.in/>
2. For the list of study centres/program study centres: [www.ignou.ac.in](http://www.ignou.ac.in)
3. IGNOU Regional Centres' website: <http://www.ignou.ac.in/ignou/aboutignou/regional/website>
4. Whom to contact for what: <http://www.ignou.ac.in/ignou/aboutignou/division/sed/activities/detail/163>

### 8.4 Some Forms for Your Use

**Please see the latest version of the forms at the following links.**

1. Sample Form for Early Declaration of Result.  
<http://www.ignou.ac.in/userfiles/APPLICATION%20FORM%20FOR%20EARLY%20DECLARATION%20OF%20RESULT%20OF%20TERM-END%20EXAMINATION.pdf>
2. Sample Form for Re-evaluation of Answer Scripts  
[http://www.ignou.ac.in/userfiles/Application%20form%20for%20Reevaluation%20of%20Answer%20Scripts\(1\).pdf](http://www.ignou.ac.in/userfiles/Application%20form%20for%20Reevaluation%20of%20Answer%20Scripts(1).pdf)
3. Sample Form for Improvement in Division/Class  
<http://www.ignou.ac.in/userfiles/Improvement%20form.pdf>
4. Sample Form for Obtaining Photocopy of the Answer Script  
<http://www.ignou.ac.in/userfiles/Application%20Form%20for%20botaining%20photocopy%20of%20the%20answer%20script.pdf>
5. Sample Form for Issue of Official Transcript  
<http://www.ignou.ac.in/userfiles/Official%20Transcript%20form.pdf>
6. Sample Form for Issue of Migration Certificate  
<http://ignou.ac.in/userfiles/Migration%20Certificate.pdf>
7. Sample Form for Obtaining Duplicate Grade Card/Mark sheet  
<http://www.ignou.ac.in/userfiles/Duplicate%20mark%20sheet%20form.pdf>
8. Application Form for Obtaining Duplicate Copy of Degree/Diploma/Certificate  
<http://www.ignou.ac.in/userfiles/Duplicate%20Degree,Diploma%20and%20Certificate%20Form.pdf>



**Evaluation Form No.1 (a)****Evaluation Sheet for Guided Experiments for MVPI-001 (for 35 Marks)**Programme and Course : **MVPI-001**

Name of the Student :

Enrolment No. :

Residential Address :

Sl. No.	Date	Title of the Experiment	Evaluation of guided experiment				Total marks	Remarks
			Performance & Observations	Reporting	Record	Viva-Voce		
			(4)	(2)	(2 )	(2)	(10)	
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								

Total Marks in experiments

Total (out of 35)

Date :

Place :

Signature of Counsellor

**Note:** Kindly use this proforma for each student individually.  
Kindly use separate proforma for each course.

**Evaluation Form No.1 (b)****Evaluation Sheet for Guided Experiments for MVPL-001 and MVPL-002 (for 70 Marks)**

Programme and Course :

Name of the Student :

Enrolment No. :

Residential Address :

Sl. No.	Date	Title of the Experiment	Evaluation of guided experiment				Total marks	Remarks
			Performance & Observations	Reporting	Record	Viva-Voce		
			(8)	(4)	(4)	4)	(20)	
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								

Total Marks in experiments

Total (out of 70)

Date :

Place :

Signature of Counsellor

**Note:** Kindly use this proforma for each student individually.  
Kindly use separate proforma for each course.

**Evaluation Form No.2 (a)****Evaluation Sheet for Unguided Experiments for MVPI-001 (for 15 Marks)**

Programme and Course :

Name of the Student :

Enrolment No. :

Residential Address :

Sl. No.	Date	Title of the Experiment	Evaluation of guided experiment			Total marks	Remarks
			Performance & Observations	Reporting	Viva-Voce		
			(8)	(2)	(5)	(15)	
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							

Total (out of 15)

Date :

Place :

Signature of Counsellor

**Note:** Kindly use this proforma for each student individually.  
Kindly use separate proforma for each course.

**Evaluation Form No.2 (b)****Evaluation Sheet for Unguided Experiments MVPL-001 and MVPL-002 (for 30 Marks)**

Programme and Course :

Name of the Student :

Enrolment No. :

Residential Address :

Sl. No.	Date	Title of the Experiment	Evaluation of guided experiment			Total marks	Remarks
			Performance & Observations	Reporting	Viva-Voce		
			(16)	(4)	(10)	(30)	
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							

Total Marks (out of 30)

Date :

Place :

Signature of Counsellor

**Note:** Kindly use this proforma for each student individually.  
Kindly use separate proforma for each course.

### Evaluation Form No.3 (a)

#### Proforma for Consolidated Mark List for MVPI-001

Programme and Course :

Centre Code :

Name of the Centre :

Year & Month :

Sl. No.	Enrolment No. of the Student	Marks obtained in guided experiments (Out of 35)	Marks obtained in assigned unguided experiment (out of 15)	Total (out of 50)

Date :

Signature of the Counsellor

Place :

Signature of the Coordinator

- Note:**
- This is a collective statement for all the students.
  - Only the consolidated mark-list must be forwarded to the concerned Regional Director of IGNOU. A copy of the forwarding letter be sent to the Director, School of Agriculture.
  - The evaluation sheets for guided experiments and for assigned unguided experiment must be handed over to the Coordinator of the study centre.

**ii) Evaluation Form No.3 (b)**

**Proforma for Consolidated mark list for MVPL-001 and MVPL-002**

Programme and Course :

Centre Code :

Name of the Centre :

Year & Month :

Sl. No.	Enrolment No. of the Student	Marks obtained in guided experiments (Out of 70)	Marks obtained in assigned unguided experiment (out of 30)	Total (out of 100)

Date :

Signature of the Counsellor

Place :

Signature of the Coordinator

- Note:**
- i) This is a collective statement for all the students.
  - ii) Only the consolidated mark-list must be forwarded to the concerned Regional Director of IGNOU. A copy of the forwarding letter be sent to the Director, School of Agriculture.
  - iii) The evaluation sheets for guided experiments and for assigned unguided experiment must be handed over to the Coordinator of the study centre.
  - iv) Kindly use separate proforma for MVPL-001 and MVPL-002 each course.

**Evaluation Form No.4**

**AWARD LIST OF MSCFSQM PROJECT (MVPP-003/MVPP-004)**

<b>MSCFSQM: PROJECT REPORT EVALUATION</b>					
<b>Sl. No.</b>	<b>P.R. No.</b>	<b>P.S. No.</b>	<b>STUDENT NAME</b>	<b>ENROLMENT No.</b>	<b>PROJECT REPORT (Out of 100)</b>
1.					
2.					

Project Synopsis (P.S.) No. given by the Regional Centre

Project Report (P.R.) No. given by the concerned Regional Centre

**(Signature of Evaluator)**

**Name of Evaluator :**

**Address :**

**Email :**

**Ph.:**

**Mobile :**

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**INDIRA GANDHI NATIONAL OPEN UNIVERSITY**  
**STUDENT REGISTRATION DIVISION**  
**MAIDAN GARHI, NEW DELHI-110068**

**Application for Internal Credit Transfer from PGDFSQM To MSCFSQM Programme**

I hereby apply for transfer of Credits from PGDFSQM to MSCFSQM Programme. The Credit transfer sought for (only for courses successfully completed under old Enrolment Number).

**Enrolment Number (Old) PGDFSQM**

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**Enrolment Number (New) allotted in MSCFSQM**

--	--	--	--	--	--	--	--	--	--

**Programme**

Sl.No.	Course Code	Title of Course	Credits
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
<b>Total</b>			

**NOTE:**

- Fee of Rs.500/- per course is required to be paid by means of a Demand Draft drawn in favour of IGNOU and payable at New Delhi, for transfer of credits for the above mentioned courses of PGDFSQM to MSCFSQM Programme. The students should submit this Credit Transfer Form, only after being admitted to the 2nd Year of MSCFSQM Programme through lateral entry and allotted a new enrolment number by SRD, to the address given below in the box.

Fee paid details: SBI collect No./Demand Draft No. \_\_\_\_\_ Date \_\_\_\_\_

Amount in Rs. \_\_\_\_\_

Bank(in case of DD) \_\_\_\_\_

- Credit Transfer of all the above courses may be affected to MSCFSQM Programme.

Signature of the Student:

**Speed Post this Credit Transfer Form along with the application, supporting documents, fee paid details to:**

**The Registrar,  
 SRD, Block No.3,IGNOU,  
 Maidan Garhi, New Delhi- 110068.**

Name and address of the student: \_\_\_\_\_

\_\_\_\_\_

Mobile No.: \_\_\_\_\_

E-mail: \_\_\_\_\_

Dated: \_\_\_\_\_



## IMPORTANT INFORMATION

Please keep this Programme Guide safely till you complete the Programme. You will need to repeatedly consult it while pursuing the PG Diploma Programme, as this guide carries information pertaining to structure, course and units; guidelines for operationalization of the programme and formats required for different purposes to make correspondence with the University.

Printed Self Learning/Instructional Study Material (SLM) is the backbone of Open and Distance Learning System (ODL). The study material is prepared by a team of experts keeping in view the requirements, understandings and interest of the learners. The material is developed through an expert committee who are distinguished academics and professionals in respective disciplines. The study material is written in such a manner that the learners can study themselves with little assistance from the Academic Counsellors at the Learner Support Centres. **It is mandatory to attend the stipulated Practical Counselling sessions (75% attendance is minimum) at the Programme Study Centre.** Further, you may also refer to text books and reference books, as per your requirement. These are available with select libraries attached to the Study Centres and Regional Centres.

The Concerned IGNOU Regional Centre will send you the study material and assignments by the registered post or may be handed over in person. If you do not receive the same for any reason, it may be immediately reported to your Regional Centre, for verification and necessary action. Further, in case, you do not receive assignments, you may obtain a copy of the same from the Study Centre or Regional Centre with which you are attached or may download it from the **IGNOU website ([www.ignou.ac.in](http://www.ignou.ac.in))**.

Remember, you are eligible for Term-end-examination in June/December, depending upon the cycle of your admission i.e. January/July, till you have valid registration up to maximum period of four years.