OUTCOME ANALYSIS

(MAPPING OF CO- PO AND ATTAINMENT)

SESSION 2019-21

DEPARTMENT OF HOME SCIENCE

SWAMI VIVEKANAND SUBHARTI UNIVERSITY

PROGRAMME

M.SC. HOME SCIENCE (FOOD AND NUTRITION)

M.Sc. Home Science (Food and Nutrition)

Programme Objectives-

To enable students- 1. To impart the understanding of the concepts of biochemistry, food chemistry and food microbiology an applicability of the concepts in various settings.
2. To enable the students to learn the human nutritional needs and methods to asses them for required planning of therapeutic diets.
3. To apply theoretical concepts in laboratory setting as per standard methods in the area of biochemistry, food chemistry and food microbiology.
4. To understand the application of nutritional sciences in clinical settings and ways to counsel and educate the population for improved health outcomes and better organisational management.
5. To acquire skills to undertake systematic research in the areas of food science and nutrition.

Programme Outcomes

PO1. The post-graduates will be able to understand the concepts of biochemistry, food chemistry and food microbiology
PO2. The post-graduates will be able to learn the methods of assessing human nutritional requirements, nutritional assessment and diet planning
PO3. The post-graduates will be able to apply theoretical concepts in laboratory setting as per standard methods
PO4. The post-graduates will be able to understand the applications of nutritional sciences in clinical interventions, communication for health promotion, food service management, food science and processing
PO5. The post-graduates will be able to acquire skills to undertake systematic research in the area of food science and nutrition

MAPPING OF COURSE OUTCOMES

Assessment, Attainment Criteria and Levels

1. Direct Assessment- 80%
    a. University Exams- 70%
    b. Sessional Exams- 30 %
2. Indirect Assessment – 20% (Course Exit Survey)

Sessional Examination

1. Attainment Level I: 60% of students scoring more than 50% marks out of the maximum marks
2. Attainment Level II: 70% of students scoring more than 50% marks out of the maximum marks
3. Attainment Level III: 80% of students scoring more than 50% marks out of the maximum marks

University Examination

1. Attainment Level I: 60% of students scoring more than 50% marks out of the maximum marks
2. Attainment Level II: 70% of students scoring more than 50% marks out of the maximum marks
3. Attainment Level III: 80% of students scoring more than 50% marks out of the maximum marks

Course Exit Survey

1. Attainment Level I: Average Score of 60% of students more than 3 (scale of 5)
2. Attainment Level II: Average Score of 70% of students more than 3 (scale of 5)
3. Attainment Level III: Average Score of 80% of students more than 3 (scale of 5)

M.Sc. FOOD & NUTRITION

M.Sc. FOOD & NUTRITION

SEMESTER I

RESEARCH METHODOLOGY (M.Sc.-HS-101)

Course objectives

1. To understand the significance of statistics & research methodology in Home Science research.
2. To understand the types, tools & methods of research & develop the ability to construct data gathering instruments appropriate with the research design
3. To understand & apply the appropriate statistical technique for the measurement & design.

Course Outcomes

1. To understand the concept of the field

2. To unable the students to learn the methods of assessment and plan the diet

3. To apply the theoretical concepts in laboratory setting

4. To understand the applications of nutritional sciences in clinical interventions, communication for health promotion, food service management, food science and processing

5. To acquire skills to undertake systematic research in the area of food science and nutrition

CO-PO Mapping course Outcomes of M.Sc.HS-101

Course Outcomes

	PO1	**PO2**	**PO3**	**PO4**	**P05**
CO1	2	2	2	2	0
CO2	2	2	2	0	3
CO3	2	0	1	1	2
CO4	2	0	2	0	3
CO5	2	2	2	0	3
Total	**10**	6	9	3	11

Average of filled	**2**	**2**	**1.6**	**1.5**	**2.75**

Direct Assessment

Total Number of Students	**% of marks expected**	**Sessional**	**End Semester Exams**
13	50	61.5% of students secured more than 50% of marks	69.2 % of students secured more than 50% of marks

Scored Attainment	**1**	**1**

Calculated Value for Direct Assessment-

Sessional- 30% of 3= 30x1/ 100= 0.3

University End Semester Exams- 70% of 1= 70x3/ 100= 0.7

Total Direct Assessment Value= 0.3+0.7= 1

Overall Calculated Direct Assessment Value= 80% of 1= 80x1/ 100= 0.8

Indirect Assessment (Course Exit Survey on 5 scale)

Sl. No.	**Average score of course exit survey (student wise)**
1	3.8
2	3.5
3	3.4
4	3.8
5	4
6	3.8
7	3.8
8	3.7
9	3.8
10	3.8
11	3.8
12	3.5

13	3.7
100% of responses are more than 3 scale	
Level	3

Calculated Value for Indirect Assessment - 20% of 3= 20x3/ 100= 0.6

Overall Assessment of Attainment of Direct and Indirect Value= 0.8+0.6= 1.6

Matrix to Calculate the Attainment Score of M.Sc. Home Science

	Calculated Attainment	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**
M.Sc. HS 101	**1.6**	**2**	2	1.6	1.5	2.75
Attainment Score		**1.6x2/3= 1.06**	**1.6x2/3= 1.06**	**1.6x1.6/3= 0.85**	**1.6x1.5/3=0.8**	**1.6x2.75/3= 1.46**
Status of Attainment		**YES**	**YES**	**NO**	**NO**	**NO**

Action Plan for Attainment of CO-PO For the next year

S.No.	
1	Improve the learning experience
2	Increase the use of ICT in teaching, learning and assessment so that learns are equipped with the necessary skills to meet the challenges of a rapidly changing learning environment

M.Sc. FOOD & NUTRITION

SEMESTER I

ADVANCED NUTRITIONAL BIOCHEMISTRY (M.Sc.-FN-102)

Course Objectives

1. To enhance the biochemistry knowledge
2. To understand the mechanisms adopted by the human body for regulation of metabolic pathways.
3. To understand the mechanisms adopted by the human body for regulation of metabolic pathways.
4. To understand the principles and use of Instruments used for biochemical analysis.

Course Outcomes

1. To impart the understanding of the concepts of biochemistry, food chemistry and food microbiology

2.To enable the students to learn the methods of assessing human nutritional requirements, nutritional assessment and diet planning

3. To understand the applications of nutritional sciences in clinical interventions, communication for health promotion, food service management, food science and processing

4. To acquire skills to undertake systematic research in the area of food science and nutrition

CO-PO Mapping course Outcomes of M.Sc.HS-102

Course Outcomes

	PO1	**PO2**	**PO3**	**PO4**	**PO5**
CO1	2	1	2	2	2
CO2	1	2	2	2	2
CO3	1	2	2	1	2
CO4	2	2	2	2	2

Total	6	7	8	7	8
Average of filled	**1.5**	**1.75**	**2**	**1.75**	**2**

Direct Assessment

Total Number of Students	**% of marks expected**	**Sessional**	**End Semester Exams**
13	50	61.5% of students secured more than 50% of marks	53.8% of students secured more than 50% of marks

Scored Attainment	**1**	**1**

Calculated Value for Direct Assessment-

Sessional- 30% of 1= 30x1/ 100= 0.3

University End Semester Exams- 70% of 1= 70x1/ 100= 0.7

Total Direct Assessment Value= 0.3+ .7= 1

Overall Calculated Direct Assessment Value= 80% of 1= 80x1/ 100= 0.8

Indirect Assessment (on 5 scale)

Sl. No.	**Average score of course exit survey (student wise)**
1	3.8
2	3.5
3	3.4
4	3.8
5	4
6	3.8
7	3.8
8	3.7
9	3.8
10	3.8
11	3.8

12	3.5
13	3.7
100% of responses are more than 3 scale	
Level	3

Calculated Value for Indirect Assessment - 20% of 3= 20x3/ 100= 0.6

Overall Assessment of Attainment of Direct and Indirect Value= 0.6+1= 1.6

Matrix to Calculate the Attainment Score of M.Sc. Home Science

	Calculated Attainment					
		PO1	**PO2**	**PO3**	**PO4**	**PO5**
Average CO-PO mapped Value	**1.6**	**1.5**	**1.75**	**2**	**1.75**	**2**
Attainment Score		**1.6X1.5/3 = 0.8**	**1.6X1.75/3 = 0.93**	**1.6X2/3 = 1.06**	**1.6X1.75/ 3 = 0.93**	**1.6X2/3 = 1.06**
Status of Attainment		**NO**	**NO**	**NO**	**NO**	**NO**

SEMESTER I

M.Sc. FOOD & NUTRITION

HUMAN PHYSIOLOGY

M.Sc.-FN-103

Course Objectives

1. Understand the physiology of the human body.
2. Develop insight of normal functioning of all the organ systems of the body and their interactions.
3. Comprehend the path physiology of commonly occurring diseases.

Course Outcomes

1. To gain knowledge about the human body and assess the normal functioning of all the organ systems of the body and their interactions.

2. To know the proper working of specific organ and related their hormone

3. Apply the knowledge of physiology of body in their life routine.

4. To acquires the skill to undertake systematic area of bio-chemistry.

CO-PO Mapping course Outcomes of M.Sc.HS-103

Course Outcomes

	PO1	**PO2**	**PO3**	**PO4**	**PO5**
CO1	1	1	3	1	0
CO2	1	1	1	1	0
CO3	1	0	0	0	0
CO4					
Total	3	2	4	**2**	**0**
Average of filled	**1**	**1**	**2**	**1**	**0**

Direct Assessment

Total Number of Students	**% of marks expected**	**Sessional**	**End Semester Exams**
13	50	92.3% of students secured more than 50% of marks	92.3 % of students secured more than 50% of marks
Scored Attainment		**3**	**3**

Calculated Value for Direct Assessment-

Sessional- 30% of 3= 30x3/ 100= .9

University End Semester Exams- 70% of 3= 70x3/ 100= 2.1

Total Direct Assessment Value= 2.1+0.9 = 3

Overall Calculated Direct Assessment Value= 80% of 3= 80x3/ 100= 2.4

Indirect Assessment (Course Exit Survey on 5 scale)

Indirect Assessment (on 5 scale)

Sl. No.	**Average score of course exit survey (student wise)**
1	3.8
2	3.5
3	3.4
4	3.8
5	4
6	3.8
7	3.8
8	3.7
9	3.8
10	3.8
11	3.8
12	3.5
13	3.7
87.83% of responses are more than 3 scale	

Level	3

Calculated Value for Indirect Assessment - 20% of 3= 20x3/ 100= 0.6

Overall Assessment of Attainment of Direct and Indirect Value= 2.4+0.6= 3

Matrix to Calculate the Attainment Score of M.Sc. Home Science

	Calculated Attainment					
		PO1	**PO2**	**PO3**	**PO4**	**PO5**
Average CO-PO mapped Value	3	**1**	1	2	1	0
Attainment Score		**3X1/3= 1**	**3X1/3= 1**	**3X2/3= 2**	**3X1/3= 1**	**3X0/3= 0**
Status of Attainment		**YES**	**YES**	**YES**	**YES**	**YES**

SEMESTER I

M.Sc. FOOD & NUTRITION

ADVANCES IN FOOD MICROBIOLOGY

M.Sc.-FN-104

Course Objective

1. Understand the microbial flora associated with food
2. Acquire knowledge on beneficial role of microorganism and relevance of microbiological safety of food
3. Understand the conventional and rapid methods for detection of food borne pathogens and their toxins.
4. Understand the role of microbes in microbial contamination of food.

Course Outcomes

1. To impart the understanding of the concepts of food microbiology **and** enable the students to learn the methods of assessing microorganism in food industry.

2. To apply theoretical concepts in laboratory setting as per standard methods of food Microbiology.

3. To understand the applications of microorganism in food science and processing

4. To acquire skills to undertake systematic research in the area of food microbiology, food science and nutrition

CO-PO Mapping course Outcomes of M.Sc.HS-104

Course Outcomes

	PO1	**PO2**	**PO3**	**PO4**	**PO5**
CO1	2	2	1	1	2
CO2	2	2	1	1	3
CO3	2	2	1	2	3
CO4	2	2	1	2	3
Total	8	**8**	4	6	**11**

Average of filled	**2**	**2**	**1.25**	**1.5**	**2.75**

Direct Assessment

Total Number of Students	**% of marks expected**	**Sessional**	**End Semester Exams**
13	50	92.3% of students secured more than 50% of marks	92.3% of students secured more than 50% of marks

Scored Attainment	**3**	**3**

Calculated Value for Direct Assessment-

Sessional- 30% of 3= 30x3/ 100= .9

University End Semester Exams- 70% of 3= 70x3/ 100= 2.1

Total Direct Assessment Value= 2.1+0.9 = 3

Overall Calculated Direct Assessment Value= 80% of 3= 80x3/ 100= 2.4

Indirect Assessment (on 5 scale)

Indirect Assessment (on 5 scale)

Sl. No.	**Average score of course exit survey (student wise)**
1	3.8
2	3.5
3	3.4
4	3.8
5	4
6	3.8
7	3.8
8	3.7
9	3.8
10	3.8
11	3.8

12	3.5
13	3.7
97.83% of responses are more than 3 scale	
Level	3

Calculated Value for Indirect Assessment - 20% of 3= 20x3/ 100= 0.6

Overall Assessment of Attainment of Direct and Indirect Value= 2.4+0.6= 3

Matrix to Calculate the Attainment Score ofM.Sc. Home Science

	Calculated Attainment					
		PO1	**PO2**	**PO3**	**PO4**	**PO5**
Average CO-PO mapped Value	3	**2**	**2**	**1.25**	**1.5**	**2.75**
Attainment Score		**3X2/3= 2**	**3X2/3= 2**	**3X1.25/3= 1.25**	**3X1.5/3= 1.5**	**3X2.75/3= 2.75**
Status of Attainment		**YES**	**YES**	**YES**	**YES**	**YES**

Action Plan for Attainment of CO-PO For the next year

1.	Enable learners communicate effectively and improve their standards of competence
2.	Improve quality, promote excellence and innovation, and increase autonomy

SEMESTER I

M.Sc. FOOD & NUTRITION

METHODS OF INVESTIGATION

M.Sc.-FN-105

Course Objectives

1. To familiarize with the applications of the above techniques.
2. To understand the principles of various analytical techniques available for nutrition research.
3. To apply the principles of various analytical techniques available for nutrition research.

Course Outcomes

1. To unable the students to learn the methods of assessment and plan the diet

2. Applications of nutritional sciences in clinical interventions, communication for health promotion, food service management, food science and processing

3. To acquire skills to undertake systematic research in the area of food science and nutrition

CO-PO Mapping course Outcomes of M.Sc.HS-105

Course Outcomes

	PO1	**PO2**	**PO3**	**PO4**	**PO5**
CO1	2	2	2	2	2
CO2	2	2	3	2	3
CO3	2	3	2	2	3
Total	6	7	7	6	**8**
Average of filled	**2**	**2.3**	**2.3**	**2**	**2.6**

Direct Assessment

Total Number of	**% of marks**	**Sessional**	**End Semester Exams**

Students	**expected**		
13	50	92.3% of students secured more than 50% of marks	92.3% of students secured more than 50% of marks

Scored Attainment	**3**	**3**

Calculated Value for Direct Assessment-

Sessional- 30% of 3= 30x3/ 100= .9

University End Semester Exams- 70% of 3= 70x3/ 100= 2.1

Total Direct Assessment Value= 2.1+0.9 = 3

Overall Calculated Direct Assessment Value= 80% of 3= 80x3/ 100= 2.4

Indirect Assessment (Course Exit Survey on 5 scale)

M.Sc. Home Science FN II year- 1

Indirect Assessment (on 5 scale)

Sl. No.	**Average score of course exit survey (student wise)**
1	3.8
2	3.5
3	3.4
4	3.8
5	4
6	3.8
7	3.8
8	3.7
9	3.8
10	3.8
11	3.8
12	3.5
13	3.7
87.83% of responses are more than 3 scale	

Level	3

Calculated Value for Indirect Assessment - 20% of 3= 20x3/ 100= 0.6

Overall Assessment of Attainment of Direct and Indirect Value=2.4 +0.6= 3

Matrix to Calculate the Attainment Score of M.Sc. Home Science

	Calculated Attainment					
Average CO-PO mapped Value	3	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**
		2	**2.3**	2.3	2	2.6
Attainment Score		**3x2/3 =2**	**3x2.3/3 =2.3**	**3x2.3/3 =2.3**	**3x2/3 =2**	**3x2.6/3 =2.6**
Status of Attainment		**YES**	**YES**	**YES**	**YES**	**YES**

Action Plan for Attainment of CO-PO For the next year

S.No.	
1	Strength strategic oversight and focus on delivery of instructions
2	Deliver appropriate infrastructure for learning environments

M.Sc. FOOD & NUTRITION

SEMESTER II

(M.Sc.-HS-201)

Course objectives

1. To understand the significance of statistics & research methodology in Home Science research.

2. To understand the types, tools & methods of research & develop the ability to construct data gathering instruments appropriate with the research design

3. To understand & apply the appropriate statistical technique for the measurement & design.

Course Outcomes

1. To understand the concept of the field

2. To unable the students to learn the methods of assessment and plan the diet

3.To apply the theoretical concepts in laboratory setting

4. To understand the applications of nutritional sciences in clinical interventions, communication for health promotion, food service management, food science and processing

5. To acquire skills to undertake systematic research in the area of food science and nutrition

CO-PO Mapping course Outcomes of M.Sc.HS-201

Course Outcomes

	PO1	**PO2**	**PO3**	**PO4**	**P05**
CO1	2	2	2	2	0
CO2	2	2	2	0	3
CO3	2	0	1	1	2
CO4	2	0	2	0	3
CO5	2	2	2	0	3
Total	**10**	6	9	3	11
Average of filled	**2**	**2**	**1.6**	**1.5**	**2.75**

M.Sc. Home Science FN Sem II- 201

Direct Assessment

Total Number of Students	**% of marks expected**	**Sessional**	**End Semester Exams**
13	50	100% of students secured more than 50% of marks	100 % of students secured more than 50% of marks
Scored Attainment		**3**	**3**

Calculated Value for Direct Assessment-

Sessional- 30% of 3= 30x3/ 100= 0.9

University End Semester Exams- 70% of 3= 70x3/ 100= 2.1

Total Direct Assessment Value= 0.9+2.1 = 3

Overall Calculated Direct Assessment Value= 80% of 3= 80x3/ 100= 2.4

Indirect Assessment (on 5 scale)

Sl. No.	**Average score of course exit survey (student wise)**
1	3.8
2	3.5
3	3.4
4	3.8
5	4
6	3.8
7	3.8
8	3.7
9	3.8
10	3.8
11	3.8
12	3.5
13	3.7

87.83% of responses are more than 3 scale	
Level	3

Calculated Value for Indirect Assessment - 20% of 3= 20x3/ 100= 0.6

Overall Assessment of Attainment of Direct and Indirect Value= 0.6+2.4= 3

Matrix to Calculate the Attainment Score of M.Sc. Home Science

	Calculated Attainment	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**
M.Sc. HS 101		**2**	2	1.6	1.5	2.75
Attainment Score	**3**	**3x2/3 = 2**	**3x2/3 = 2**	**3x1.6/3 = 1.6**	**3x1.5/3 = 1.5**	**3x2.75/3 = 2.75**
Status of Attainment		**YES**	**YES**	**YES**	**YES**	**YES**

Action Plan for Attainment of CO-PO For the next year

S.No.	
1	Improve the learning experience
2	Increase the use of ICT in teaching, learning and assessment so that learns are equipped with the necessary skills to meet the challenges of a rapidly changing learning environment

M.Sc. FOOD & NUTRITION

SEMESTER II

(M.Sc.-FN-202)

Course Objectives

1. To enhance the biochemistry knowledge
2. To understand the mechanisms adopted by the human body for regulation of metabolic pathways.
3. To understand the mechanisms adopted by the human body for regulation of metabolic pathways.
4. To understand the principles and use of Instruments used for biochemical analysis.

Course Outcomes

1. To impart the understanding of the concepts of biochemistry, food chemistry and food microbiology

2. To enable the students to learn the methods of assessing human nutritional requirements,nutritional assessment and diet planning

3. To understand the applications of nutritional sciences in clinical interventions, communication for health promotion, food service management, food science and processing

4. To acquire skills to undertake systematic research in the area of food science and nutrition

CO-PO Mapping course Outcomes of M.Sc.FN-202

Course Outcomes

	PO1	**PO2**	**PO3**	**PO4**	**PO5**
CO1	2	1	2	2	2
CO2	1	2	2	2	2
CO3	1	2	2	1	2
CO4	2	2	2	2	2

Total	6	7	8	7	8
Average of filled	**1.5**	**1.75**	**2**	**1.75**	**2**

Direct Assessment

Total Number of Students	**% of marks expected**	**Sessional**	**End Semester Exams**
13	50	84.6% of students secured more than 50% of marks	100 % of students secured more than 50% of marks

Scored Attainment	**3**	**3**

Calculated Value for Direct Assessment-

Sessional- 30% of 3= 30x3/ 100= 0.9

University End Semester Exams- 70% of 3= 70x3/ 100= 2.1

Total Direct Assessment Value= 2.1+ 0.9= 3

Overall Calculated Direct Assessment Value= 80% of 3= 80x3/ 100= 2.4

Indirect Assessment (on 5 scale)

Sl. No.	**Average score of course exit survey (student wise)**
1	3.8
2	3.5
3	3.4
4	3.8
5	4
6	3.8
7	3.8
8	3.7
9	3.8
10	3.8
11	3.8

12	3.5
13	3.7
97.83% of responses are more than 3 scale	
Level	3

Calculated Value for Indirect Assessment - 20% of 3= 20x3/ 100= 0.6

Overall Assessment of Attainment of Direct and Indirect Value= 0.6+2.4= 3

Matrix to Calculate the Attainment Score of M.Sc. Home Science

	Calculated Attainment					
		PO1	**PO2**	**PO3**	**PO4**	**PO5**
Average CO-PO mapped Value	**3**	**1.5**	**1.75**	**2**	**1.75**	**2**
Attainment Score		**3X1.5/3 = 1.5**	**3X1.75/3 = 1.75**	**3X2/3 = 2**	**3X1.75/3 = 1.75**	**3X2/3 = 2**
Status of Attainment		**YES**	**YES**	**YES**	**YES**	**YES**

SEMESTER I

M.Sc. FOOD & NUTRITION

M.Sc.-FN-203

Course Objectives

1. Understand the physiology of the human body.
2. Develop insight of normal functioning of all the organ systems of the body and their interactions.
3. Comprehend the path physiology of commonly occurring diseases.

Course Outcomes

1. To gain knowledge about the human body and assess the normal functioning of all the organ systems of the body and their interactions.
2. To know the proper working of specific organ and related their hormone
3. Apply the knowledge of physiology of body in their life routine.
4. To acquires the skill to undertake systematic area of bio-chemistry.

CO-PO Mapping course Outcomes of M.Sc.HS-203

Course Outcomes

	PO1	**PO2**	**PO3**	**PO4**	**PO5**
CO1	1	1	3	1	0
CO2	1	1	1	1	0
CO3	1	0	0	0	0
CO4					
Total	3	2	4	**2**	**0**
Average of filled	**1**	**1**	**2**	**1**	**0**

Total Number of	**% of marks**	**Sessional**	**End Semester Exams**

Students	**expected**		
13	50	100% of students secured more than 50% of marks	92.3% of students secured more than 50% of marks

Scored Attainment	**3**	**3**

Calculated Value for Direct Assessment-

Sessional- 30% of 3= 30x3/ 100= .9

University End Semester Exams- 70% of 3= 70x3/ 100= 2.1

Total Direct Assessment Value= 2.1+0.9 = 3

Overall Calculated Direct Assessment Value= 80% of 3= 80x3/ 100= 2.4

Indirect Assessment (Course Exit Survey on 5 scale)

Indirect Assessment (on 5 scale)

Indirect Assessment (on 5 scale)

Sl. No.	**Average score of course exit survey (student wise)**
1	3.8
2	3.5
3	3.4
4	3.8
5	4
6	3.8
7	3.8
8	3.7
9	3.8
10	3.8
11	3.8
12	3.5
13	3.7
87.83% of responses are more than 3 scale	

Level	3

Calculated Value for Indirect Assessment - 20% of 3= 20x3/ 100= 0.6

Overall Assessment of Attainment of Direct and Indirect Value= 2.4+0.6= 3

Matrix to Calculate the Attainment Score of M.Sc. Home Science

	Calculated Attainment					
		PO1	**PO2**	**PO3**	**PO4**	**PO5**
Average CO-PO mapped Value	3	1	1	2	1	0
Attainment Score		**3X1/3= 1**	**3X1/3= 1**	**3X2/3= 2**	**3X1/3= 1**	**3X0/3= 0**
Status of Attainment		**YES**	**YES**	**YES**	**YES**	**YES**

SEMESTER I

M.Sc. FOOD & NUTRITION

M.Sc.-FN-204

Course Objective

1. Understand the microbial flora associated with food
2. Acquire knowledge on beneficial role of microorganism and relevance of microbiological safety of food
3. Understand the conventional and rapid methods for detection of food borne pathogens and their toxins.
4. Understand the role of microbes in microbial contamination of food.

Course Outcomes

1. To impart the understanding of the concepts of food microbiology **and** enable the students to learn the methods of assessing microorganism in food industry.

2. To apply theoretical concepts in laboratory setting as per standard methods of food Microbiology.

3. To understand the applications of microorganism in food science and processing

4. To acquire skills to undertake systematic research in the area of food microbiology, Food science and nutrition

CO-PO Mapping course Outcomes of M.Sc.HS-204

Course Outcomes

	PO1	**PO2**	**PO3**	**PO4**	**PO5**
CO1	2	2	1	1	2
CO2	2	2	1	1	3
CO3	2	2	1	2	3
CO4	2	2	1	2	3
Total	8	**8**	4	6	**11**
Average of	**2**	**2**	**1.25**	**1.5**	**2.75**

filled					

Direct Assessment

Total Number of Students	**% of marks expected**	**Sessional**	**End Semester Exams**
13	50	100% of students secured more than 50% of marks	100 % of students secured more than 50% of marks

Scored Attainment	**3**	**3**

Calculated Value for Direct Assessment-

Sessional- 30% of 3= 30x3/ 100= 0.9

University End Semester Exams- 70% of 3= 70x3/ 100= 2.1

Total Direct Assessment Value= 2.1+0.9 = 3

Overall Calculated Direct Assessment Value= 80% of 3= 80x3/ 100= 2.4

Indirect Assessment (on 5 scale)

Indirect Assessment (on 5 scale)

Sl. No.	**Average score of course exit survey (student wise)**
1	3.8
2	3.5
3	3.4
4	3.8
5	4
6	3.8
7	3.8
8	3.7
9	3.8
10	3.8
11	3.8
12	3.5

13	3.7
92.83% of responses are more than 3 scale	
Level	3

Calculated Value for Indirect Assessment - 20% of 3= 20x3/ 100= 0.6

Overall Assessment of Attainment of Direct and Indirect Value= 2.4+0.6= 3

Matrix to Calculate the Attainment Score ofM.Sc. Home Science

	Calculated Attainment					
		PO1	**PO2**	**PO3**	**PO4**	**PO5**
Average CO-PO mapped Value	3	2	**2**	1.25	1.5	2.75
Attainment Score		**3X2/3= 2**	**3X2/3= 2**	**3X1.25/3= 1.25**	**3X1.5/3= 1.5**	**3X2.75/3= 2.75**
Status of Attainment		**YES**	**YES**	**YES**	**YES**	**YES**

Action Plan for Attainment of CO-PO For the next year

1.	Enable learners communicate effectively and improve their standards of competence
2.	Improve quality, promote excellence and innovation, and increase autonomy

SEMESTER II

M.Sc. FOOD & NUTRITION

Current Trends nd Issues in Food and Nutrition

.M.Sc.-FN-205

Course Objectives

1. To familiarize with the applications of the above techniques.
2. To understand the principles of various analytical techniques available for nutrition research.
3. To apply the principles of various analytical techniques available for nutrition research.

Course Outcomes

1. To unable the students to learn the methods of assessment and plan the diet

2. Applications of nutritional sciences in clinical interventions, communication for health promotion, food service management, food science and processing

3. To acquire skills to undertake systematic research in the area of food science and nutrition.

CO-PO Mapping course Outcomes of M.Sc.FN-205

Course Outcomes

	PO1	**PO2**	**PO3**	**PO4**	**PO5**
CO1	2	2	2	2	2
CO2	2	2	3	2	3
CO3	2	3	2	2	3
Total	6	7	7	6	**8**
Average of filled	**2**	**2.3**	**2.3**	**2**	**2.6**

Direct Assessment

Total Number of Students	% of marks expected	Sessional	End Semester Exams
13	50	100% of students secured more than 50% of marks	100 % of students secured more than 50% of marks

Scored Attainment	3	3

Calculated Value for Direct Assessment-

Sessional- 30% of 3= 30x3/ 100= 0.9

University End Semester Exams- 70% of 3= 70x3/ 100= 2.1

Total Direct Assessment Value= 0.9+2.1 = 3

Overall Calculated Direct Assessment Value= 80% of 3= 80x3/ 100= 2.4

Indirect Assessment (Course Exit Survey on 5 scale)

Indirect Assessment (on 5 scale)

Sl. No.	Average score of course exit survey (student wise)
1	3.8
2	3.5
3	3.4
4	3.8
5	4
6	3.8
7	3.8
8	3.7
9	3.8
10	3.8
11	3.8
12	3.5
13	3.7
91.83% of responses are more than 3 scale	

Level	3

Calculated Value for Indirect Assessment - 20% of 3= 20x3/ 100= 0.6

Overall Assessment of Attainment of Direct and Indirect Value=0.6 +2.4= 3

Matrix to Calculate the Attainment Score of M.Sc. Home Science

	Calculated Attainment					
Average CO-PO mapped Value	3	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**
		2	**2.3**	2.3	2	2.6
Attainment Score		**3x2/3= 2**	**3x2.3/3= 2.3**	**3x2.3/3 = 2.3**	**3x2/3= 2**	**3x2.6/3 = 2.6**
Status of Attainment		**YES**	**YES**	**YES**	**YES**	**YES**

Action Plan for Attainment of CO-PO For the next year

S.No.	
1	Strength strategic oversight and focus on delivery of instructions
2	Deliver appropriate infrastructure for learning environments

SEMESTER III

M.Sc. FOOD & NUTRITION

DISSERTATION

M.Sc.-FN-301

Course Objectives

1. Know the practical aspects of, collecting data/ project work
2. Evaluate, select and use appropriate strategies for reduction, analysis and presentation of data collected during research process/ project work
3. Suitably illustrate data/ insights using various graphical and other methods
4. Prepare a dissertation document/ project report based on research process/ project work done.

Course Outcomes

1. Know the practical aspects of, collecting data/ project work

2. Evaluate, select and use appropriate strategies for reduction, analysis and presentation of data collected during research process/ project work

3. Suitably illustrate data/ insights using various graphical and other methods.

4. Prepare a dissertation document/ project report based on research process/ project work done.

CO-PO Mapping course Outcomes of M.Sc.HS-301

Course Outcomes

	PO1	**PO2**	**PO3**	**PO4**	**PO5**
CO1	2	2	2	2	3
CO2	2	2	2	2	3
CO3	3	3	2	2	3
CO4	3	3	2	2	3

Total	**10**	10	8	8	**12**
Average of filled	**2.5**	**2.5**	**2**	**2**	**3**

Direct Assessment

Total Number of Students	**% of marks expected**	**Sessional**	**End Semester Exams**
13	50	100 % of students secured more than 50% of marks	53.84 % of students secured more than 50% of marks

Scored Attainment	**3**	1

Calculated Value for Direct Assessment-

Sessional- 30% of 3= 30x3/ 100= .9

University End Semester Exams- 70% of 1= 70x1/ 100=0.7

Total Direct Assessment Value= 0.9+0.7 = 1.6

Overall Calculated Direct Assessment Value= 80% of 1.6= 80x1.6/ 100= 1.28

Indirect Assessment (Course Exit Survey on 5 scale)

Indirect Assessment (on 5 scale)

Sl. No.	**Average score of course exit survey (student wise)**
1	3.4
2	3.1
3	3.8
4	3.5
5	3.8
6	3.6
7	3.3
8	3.7
9	3.8
10	3.2

11	3.5
12	3.1
13	3.7
100 % of responses are more than 3 scale	
Level	3

Calculated Value for Indirect Assessment - 20% of 3= 20x3/ 100= 0.6

Overall Assessment of Attainment of Direct and Indirect Value= 1.28+.6= 1.88

Matrix to Calculate the Attainment Score of M.Sc. Home Science

	Calculated Attainment	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**
Average CO-PO mapped Value	1.88	2.5	2.5	2	2	3
Attainment Score		**2.5x1.88/3=1.56**	**2.5x1.88/3=1.56**	**2x1.88/3=1.25**	**2x1.88/3=1.25**	**3x1.88/3=1.88**
Status of Attainment		**YES**	**YES**	**NO**	**NO**	**YES**

Action Plan for Attainment of CO-PO For the next year

S.No.	
1	Improve the learning experience
2	Improve quality, promote excellence and innovation, and increase autonomy
3	Create a stronger focus on entrepreneurship, creativity and innovation
4	Works with enterprise to increase the number of researchers
5	Strength strategic oversight and focus on delivery of instructions

SEMESTER III

M.Sc. FOOD & NUTRITION

NUTRITION IN EMERGENCIES AND DISASTER

M.Sc.-FN-302

Course Outcomes

1. This course will make the students familiar with the process of planning and management of public health nutrition programmes.
2. It will help them understand the concept of monitoring of programmes and nutritional surveillance.
3. The students will also learn about nutrition in emergency and disaster situations.

Course Outcomes

1. Get acquainted with the nutritional problems during emergencies/ disasters and the
2. strategies to tackle them.
3. To familiarize students with various natural and manmade emergencies and disasters
4. having an impact on nutrition and health status.
5. Understand strategies for nutritional rehabilitation management of the health of emergency affected populations

CO-PO Mapping course Outcomes of M.Sc.HS-302

Course Outcomes

	PO1	**PO2**	**PO3**	**PO4**	**PO5**
CO1	3	2	1	1	2
CO2	3	2	1	1	2
CO3	3	2	1	1	0
Total	9	6	3	3	4
Average of filled	**3**	**2**	**1**	**1**	**2**

Direct Assessment

Total Number of Students	**% of marks expected**	**Sessional**	**End Semester Exams**
13	50	100% of students secured more than 50% of marks	84.61 % of students secured more than 50% of marks

Scored Attainment	**3**	**3**

Calculated Value for Direct Assessment-

Sessional- 30% of 3= 30x3/ 100= .9

University End Semester Exams- 70% of 3= 70x3/ 100= 2.1

Total Direct Assessment Value= 2.1+0.9 = 3

Overall Calculated Direct Assessment Value= 80% of 3= 80x3/ 100= 2.4

Indirect Assessment (Course Exit Survey on 5 scale)

Indirect Assessment (on 5 scale)

Sl. No.	**Average score of course exit survey (student wise)**
1	3.8
2	3.5
3	3.8
4	3.8
5	3.8
6	3.6
7	3.8
8	3.7
9	3.8
10	3.7
11	3.5
12	3.5
13	3.7
100% of responses are more than 3 scale	

Level	3

Calculated Value for Indirect Assessment - 20% of 3= 20x3/ 100= 0.6

Overall Assessment of Attainment of Direct and Indirect Value= 2.4+0.6= 3

Matrix to Calculate the Attainment Score of M.Sc. Home Science

	Calculated Attainment	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**
Average CO-PO mapped Value	**3**	**3**	**2**	1	1	2
Attainment Score		**3X3/3=3**	2X3/3=2	1X3/3 = 1	1x3/3 =1	2x3/3 = 2
Status of Attainment		**YES**	**YES**	**YES**	**YES**	**YES**

Action Plan for Attainment of CO-PO For the next year

S.No.	
1	Strength strategic oversight and focus on delivery of instructions
2	Deliver appropriate infrastructure for learning environments

SEMESTER III

M.Sc. FOOD &NUTRITION

Clinical and Therapeutic Nutrition

M.Sc.-FN- 303A

Course Objectives

1. To understand concepts of unit operations in processing.
2. To Acquire the knowledge of principles of food preservation and its application
3. To acquaint with properties of foods and basic principle of Food Engineering.
4. To understand the food Processes, along with the unit operations.

Course Outcomes

1. To understand nature of various food products constituents, additives and adulterants**.**
2. Gain the knowledge of food packaging and its interaction with food products.
3. Understand the basic concepts of properties of foods and basic food engineering concepts.
4. Acquire the knowledge of various unit operations in food processing and Gain the knowledge of food packaging and its interaction with food products.

CO-PO Mapping course Outcomes of M.Sc.HS-303A

Course Outcomes

	PO1	**PO2**	**PO3**	**PO4**	**PO5**
CO1	3	3	2	1	2
CO2	1	1	1	1	1
CO3	3	3	3	2	2
CO4	3	2	2	2	3
Total	10	9	8	6	**8**
Average of filled	**2.5**	**2.25**	**2**	**1.5**	**2**

Direct Assessment

Total Number of Students	% of marks expected	Sessional	End Semester Exams
13	50	100 % of students secured more than 50% of marks	50.76% of students secured more than 50% of marks
Scored Attainment		3	1

Calculated Value for Direct Assessment-

Sessional- 30% of 3= 30x3/ 100= 0.9

University End Semester Exams- 70% of 1= 70x1/ 100= 0.7

Total Direct Assessment Value= 0.9+0.7 =1.6

Overall Calculated Direct Assessment Value= 80% of 1.6= 80x1.6/ 100=1.28

Indirect Assessment (on 5 scale)

Sl. No.	Average score of course exit survey (student wise)
1	3.8
2	3.5
3	3.8
4	3.8
5	3.8
6	3.6
7	3.8
8	3.7
9	3.8
10	3.7
11	3.5
12	3.5
13	3.7
100% of responses are more than 3 scale	
Level	3

Calculated Value for Indirect Assessment - 20% of 3= 20x3/ 100= 0.6

Overall Assessment of Attainment of Direct and Indirect Value= 1.28+0.6= 1.88

Matrix to Calculate the Attainment Score of M.Sc. Home Science

	Calculated Attainment	PO1	PO2	PO3	PO4	PO5
Average CO-PO mapped Value	1.88	2.5	2.25	2	1.5	2
Attainment Score		2.5x1.88/3=1.56	2.25x1.88/3=1.41	2x1.88/3=1.25	1.5x1.88/3=0.94	2x1.88/3=1.25
Status of Attainment		YES	YES	YES	NO	YES

Action Plan for Attainment of CO-PO For the next year

S.No.	
1	Strength strategic oversight and focus on delivery of instructions
2	Deliver appropriate infrastructure for learning environments

SEMESTER III

M.Sc. FOOD & NUTRITION

SPECIALIZATION A

INSTITUTIONAL FOOD MANAGEMENT

M.Sc.-FN-304A

Course Objectives

1. To develop a knowledge base about the facilities required for different types of food service units.
2. To equip individuals in understanding and managing resources in a food service institution.
3. Develop specific skills to apply the most widely used methods in different food production units.

Course Outcomes

1. Develop knowledge in managing various food service systems.
2. Understand and manage resources in a food service institution.
3. Provide practical experience in managing food material for food service management

CO-PO Mapping course Outcomes of M.Sc.HS-304A

Course Outcomes

	PO1	**PO2**	**PO3**	**PO4**
CO1	3	2	3	2
CO2	2	2	2	2
CO3	1	1	1	0
Total	6	5	6	4
Average of filled	**2**	**1.6**	**2**	**2**

Direct Assessment

Total Number of Students	% of marks expected	Sessional	End Semester Exams
13	50	100% of students secured more than 50% of marks	84.61 % of students secured more than 50% of marks

Scored Attainment	3	3

Calculated Value for Direct Assessment-

Sessional- 30% of 3= 30x3/ 100= .9

University End Semester Exams- 70% of 3= 70x3/ 100= 2.1

Total Direct Assessment Value= 2.1+0.9 = 3

Overall Calculated Direct Assessment Value= 80% of 3= 80x3/ 100= 2.4

Indirect Assessment (Course Exit Survey on 5 scale)

Indirect Assessment (on 5 scale)

Sl. No.	Average score of course exit survey (student wise)
1	3.2
2	3.5
3	3.8
4	3.2
5	3.8
6	3.6
7	3.8
8	3.7
9	3.2
10	3.7
11	3.5
12	3.5
13	3.2
100% of responses are more than 3 scale	

Level	3

Calculated Value for Indirect Assessment - 20% of 3= 20x3/ 100= 0.6

Overall Assessment of Attainment of Direct and Indirect Value= 2.4+0.6= 3

Matrix to Calculate the Attainment Score of M.Sc. Home Science

	Calculated Attainment	**PO1**	**PO2**	**PO3**	**PO4**
Average CO-PO mapped Value	**3**	**2**	**1.6**	**2**	**2**
Attainment Score		**2x3/3=2**	1.6x3/3=1.6	**2x3/3=2**	**2x3/3=2**
Status of Attainment		**YES**	**YES**	**YES**	**YES**

SEMESTER III

M.Sc. FOOD & NUTRITION

ASSESSMENT OF NUTRITIONAL STATUS

M.Sc.-FN-305A

Course Objectives

1. Understand the concept and purpose of nutritional status assessment in community setting.
2. Explain nutritional concerns among vulnerable sections of the community and strategies to combat them.
3. Gain knowledge with regard to standard methods and techniques for assessing nutritional status.
4. Be familiar with the use of indices and indicators for screening and consequent identification of malnutrition in the community

Course Outcomes

1. The purpose of this course is to enable the students to understand the concept and methods of nutritional status assessment of a community.

2. This will help them to comprehend the nutrition concerns among communities, the correct screening criteria for malnutrition , along with strategies to combat and prevent them.

CO-PO Mapping course Outcomes of M.Sc. HS-305A

Course Outcomes

	PO1	**PO2**	**PO3**	**PO4**	**PO5**
CO1	3	3	2	3	3
CO2	2	3	2	2	2
Total	5	6	4	5	**5**
Average of filled	**2.5**	**3**	**2**	**2.5**	**2.5**

Direct Assessment

Total Number of Students	**% of marks expected**	**Sessional**	**End Semester Exams**
13	50	92.9 % of students secured more than 50% of marks	100 % of students secured more than 50% of marks
Scored Attainment		**3**	**3**

Calculated Value for Direct Assessment-

Sessional- 30% of 3= 30x3/ 100= .9

University End Semester Exams- 70% of 3= 70x3/ 100= 2.1

Total Direct Assessment Value= 2.1+0.9 = 3

Overall Calculated Direct Assessment Value= 80% of 3= 80x3/ 100= 2.4

Indirect Assessment (Course Exit Survey on 5 scale)

Indirect Assessment (on 5 scale)

Sl. No.	**Average score of course exit survey (student wise)**
1	3.8
2	3.5
3	3.8
4	3.1
5	3.3
6	3.6
7	3.8
8	3.7
9	3.8
10	3.2
11	3.5
12	3.5

13	3.7
100% of responses are more than 3 scale	
Level	3

Calculated Value for Indirect Assessment - 20% of 3 = 20x3/ 100= 0.6

Overall Assessment of Attainment of Direct and Indirect Value= 2.4+0.6= 3

Matrix to Calculate the Attainment Score of M.Sc. Home Science

	Calculated Attainment	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**
Average CO-PO mapped Value	**3**	2.5	3	2	2.5	2.5
Attainment Score		**2.5x3/3 = 2.5**	3x3/3 = 3	2x3/3 = 2	**2.5x3/3 = 2.5**	**2.5x3/3 = 2.5**
Status of Attainment		**YES**	**YES**	**YES**	**YES**	**YES**

Action Plan for Attainment of CO-PO For the next year

S.No.	
1	Improve the learning experience
2	Increase the use of ICT in teaching, learning and assessment so that learns are equipped with the necessary skills to meet the challenges of a rapidly changing learning environment
3	Enable learners communicate effectively and improve their standards of competence
4	Improve quality, promote excellence and innovation, and increase autonomy

M.Sc. FOOD & NUTRITION

SEMESTER IV

(M.Sc.-HS-401)

Course objectives

1. To understand the significance of statistics & research methodology in Home Science research.
2. To understand the types, tools & methods of research & develop the ability to construct data gathering instruments appropriate with the research design
3. To understand & apply the appropriate statistical technique for the measurement & design.

Course Outcomes

1. To understand the concept of the field

2. To unable the students to learn the methods of assessment and plan the diet

3.To apply the theoretical concepts in laboratory setting

4. To understand the applications of nutritional sciences in clinical interventions, communication for health promotion, food service management, food science and processing

5. To acquire skills to undertake systematic research in the area of food science and nutrition.

CO-PO Mapping course Outcomes of M.Sc.HS-401

Course Outcomes

	PO1	**PO2**	**PO3**	**PO4**	**P05**
CO1	2	2	2	2	0
CO2	2	2	2	0	3
CO3	2	0	1	1	2
CO4	2	0	2	0	3
CO5	2	2	2	0	3
Total	**10**	6	9	3	11
Average of filled	**2**	**2**	**1.6**	**1.5**	**2.75**

M.Sc. Home Science FN Sem III- 401

Direct Assessment

Total Number of Students	**% of marks expected**	**Sessional**	**End Semester Exams**
13	50	100 % of students secured more than 50% of marks	100 % of students secured more than 50% of marks
Scored Attainment		**3**	**3**

Calculated Value for Direct Assessment-

Sessional- 30% of 3= 30x3/ 100= .9

University End Semester Exams- 70% of 3= 70x3/ 100= 2.1

Total Direct Assessment Value= 2.1+0.9 = 3

Overall Calculated Direct Assessment Value= 80% of 3= 80x3/ 100= 2.4

Indirect Assessment (Course Exit Survey on 5 scale)

M.Sc. Home Science FN IV year- 2

Indirect Assessment (on 5 scale)

Sl. No.	**Average score of course exits survey (student wise)**
1	3.5
2	3.5
3	3.4
4	3.9
5	3
6	3.6
7	3.8
8	3.7
10	3.7
11	3.5
12	3.5
13	3.5

100% of responses are more than 3 scale

S.No.	
1	Improve the learning experience
2	Increase the use of ICT in teaching, learning and assessment so that learns are equipped with the necessary skills to meet the challenges of a rapidly changing learning environment

Level	3

Calculated Value for Indirect Assessment - 20% of 3= 20x3/ 100= 0.6

Overall Assessment of Attainment of Direct and Indirect Value= 0.6+2.4= 3

Matrix to Calculate the Attainment Score of M.Sc. Home Science

	Calculated Attainment	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**
M.Sc. HS 101	**3**	**2**	**2**	**1.63**	**1.5**	**2.75**
Attainment Score		**2x3/3 = 2**	**2x3/3 = 2**	**1.63x3/3 = 1.63**	**1.5x3/3 = 1.5**	**2.75x3/3 = 2.75**
Status of Attainment		**YES**	**YES**	**YES**	**YES**	**YES**

Action Plan for Attainment of CO-PO For the next year

M.Sc. FOOD & NUTRITION

SEMESTER IV

M.Sc.-HS-402

Course Objectives

1. To enhance the biochemistry knowledge
2. To understand the mechanisms adopted by the human body for regulation of metabolic pathways.
3. To understand the mechanisms adopted by the human body for regulation of metabolic pathways.
4. To understand the principles and use of Instruments used for biochemical analysis.

Course Outcomes

1. To impart the understanding of the concepts of biochemistry, food chemistry and food microbiology.
2. To enable the students to learn the methods of assessing human nutritional requirements, nutritional assessment and diet planning**.**
3. To understand the applications of nutritional sciences in clinical interventions, communication for health promotion, food service management, food science a processing
4. To acquire skills to undertake systematic research in the area of food science and Nutrition.

CO-PO Mapping course Outcomes of M.Sc. HS-402

Course Outcomes

	PO1	**PO2**	**PO3**	**PO4**	**PO5**
CO1	2	1	2	2	2
CO2	1	2	2	2	2
CO3	1	2	2	1	2
CO4	2	2	2	2	2

Total	6	7	8	7	8
Average of filled	**1.5**	**1.75**	**2**	**1.75**	**2**

M.Sc. Home Science FN Sem III- 402

Direct Assessment

Total Number of Students	**% of marks expected**	**Sessional**	**End Semester Exams**
13	50	100 % of students secured more than 50% of marks	100 % of students secured more than 50% of marks
Scored Attainment		**3**	**3**

Calculated Value for Direct Assessment-

Sessional- 30% of 3= 30x3/ 100= .9

University End Semester Exams- 70% of 3= 70x3/ 100= 2.1

Total Direct Assessment Value= 2.1+0.9 = 3

Overall Calculated Direct Assessment Value= 80% of 3= 80x3/ 100= 2.4

Indirect Assessment (Course Exit Survey on 5 scale)

Total Student:-13

S.No.	**Average score of Course Exit Survey(student wise)**
1.	3.6
2.	3
3.	3
4.	3.8
5.	3.6
6.	3.5
7.	3.6
8.	3.8
9.	4

10.	3
11.	3.5
12.	3.6
13.	3.6
100% of responses are more than 3 scale	
Level	3

Calculated Value for Indirect Assessment - 20% of 3= 20x3/ 100= 0.6

Overall Assessment of Attainment of Direct and Indirect Value= 0.6+2.4= 3

Matrix to Calculate the Attainment Score of M.Sc. Home Science

	Calculated Attainment	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**
M.Sc. HS 101	**3**	1.5	1.75	2	1.75	2
Attainment Score		1.5x3/3=1.5	1.75x3/3=1.75	2x3/3=2	1.75x3/3=1.75	2x3/3=2
Status of Attainment		**YES**	**YES**	**YES**	**YES**	**YES**

Action Plan for Attainment of CO-PO For the next year

S.No.	
1.	Improve the learning experience
2.	Increase the use of ICT in teaching, learning and assessment so that learners are equipped with the necessary skills to meet the challenges of a rapidly changing learning environment
3.	Enable learners communicate effectively and improve their standards of competence

SEMESTER IV

M.Sc. FOOD & NUTRITION

M.Sc.-FN-403

Course Objectives

1. Understand the physiology of the human body.
2. Develop insight of normal functioning of all the organ systems of the body and their interactions.
3. Comprehend the path physiology of commonly occurring diseases.

Course Outcomes

1. To gain knowledge about the human body and assess the normal functioning of all the organ systems of the body and their interactions.

2. To know the proper working of specific organ and related their hormone

3. Apply the knowledge of physiology of body in their life routine.

1. To acquires the skill to undertake systematic area of bio-chemistry.

CO-PO Mapping course Outcomes of M.Sc.HS-403

Course Outcomes

	PO1	**PO2**	**PO3**	**PO4**	**PO5**
CO1	1	1	3	1	0
CO2	1	1	1	1	0
CO3	1	0	0	0	0
CO4					
Total	3	2	4	**2**	**0**
Average of filled	**1**	**1**	**2**	**1**	**0**

M.Sc. Home Science FN Sem III- 403

Direct Assessment

Total Number of Students	**% of marks expected**	**Sessional**	**End Semester Exams**
13	50	100 % of students secured more than 50% of marks	100 % of students secured more than 50% of marks
Scored Attainment		**3**	**3**

Calculated Value for Direct Assessment-

Sessional- 30% of 3= 30x3/ 100= .9

University End Semester Exams- 70% of 3= 70x3/ 100= 2.1

Total Direct Assessment Value= 2.1+0.9 = 3

Overall Calculated Direct Assessment Value= 80% of 3= 80x3/ 100= 2.4

Indirect Assessment (Course Exit Survey on 5 scale)

Total Student:-13

S.No.	**Average score of Course Exit Survey(student wise)**
1.	3.6
2.	3
3.	3
4.	3.8
5.	3.6
6.	3.5
7.	3.6
8.	3
9.	3
10.	3.3
11.	3.5
12.	3.6
13.	3.6
100% of responses are more than 3 scale	

Level	3

Calculated Value for Indirect Assessment - 20% of 3= 20x3/ 100= 0.6

Overall Assessment of Attainment of Direct and Indirect Value= 2.4+0.6= 3

Matrix to Calculate the Attainment Score of M.Sc. Home Science

	Calculated Attainment					
		PO1	**PO2**	**PO3**	**PO4**	**PO5**
Average CO-PO mapped Value	3	**1**	1	2	1	0
Attainment Score		**1X3/3 = 1**	**1X3/3 = 1**	2X3/3 = 2	**1X3/3 = 1**	**0X3/3 = 0**
Status of Attainment		**YES**	**YES**	**YES**	**YES**	**YES**

Action Plan for Attainment of CO-PO For the next year

S.No.	
1	Focus on the preparation of students for competitive examination
2.	Increase the use of ICT in teaching, learning and assessment so that learners are equipped with the necessary skills to meet the challenges of a rapidly changing learning environment
3.	Enable learners communicate effectively and improve their standards of competence
4.	Improve quality, promote excellence and innovation, and increase autonomy
5.	Create a stronger focus on Entrepreneurship, Creativity and Innovation
6	Strengthen strategic oversight and focus on delivery of instructions

SEMESTER I

M.Sc. FOOD & NUTRITION

M.Sc.-FN-404

Course Objective

1. Understand the microbial flora associated with food
2. Acquire knowledge on beneficial role of microorganism and relevance of microbiological safety of food
3. Understand the conventional and rapid methods for detection of food borne pathogens and their toxins.
4. Understand the role of microbes in microbial contamination of food.

Course Outcomes

1. To impart the understanding of the concepts of food microbiology **and** enable the students to learn the methods of assessing microorganism in food industry.

2. To apply theoretical concepts in laboratory setting as per standard methods of food Microbiology.

3. To understand the applications of microorganism in food science and processing

4. To acquire skills to undertake systematic research in the area of food microbiology, food science and nutrition

CO-PO Mapping course Outcomes of M.Sc.HS-404

Course Outcomes

	PO1	**PO2**	**PO3**	**PO4**	**PO5**
CO1	2	2	1	1	2
CO2	2	2	1	1	3
CO3	2	2	1	2	3
CO4	2	2	1	2	3
Total	8	**8**	4	6	**11**
Average of	**2**	**2**	**1.25**	**1.5**	**2.75**

filled					

M.Sc. Home Science FN Sem III- 404

Direct Assessment

Total Number of Students	**% of marks expected**	**Sessional**	**End Semester Exams**
13	50	100% of students secured more than 50% of marks	100 % of students secured more than 50% of marks
Scored Attainment		**3**	**3**

Calculated Value for Direct Assessment-

Sessional- 30% of 3= 30x3/ 100= .9

University End Semester Exams- 70% of 3= 70x3/ 100= 2.1

Total Direct Assessment Value= 2.1+0.9 = 3

Overall Calculated Direct Assessment Value= 80% of 3= 80x3/ 100= 2.4

Total Student:-13

S.No.	**Average score of Course Exit Survey(student wise)**
1.	3.6
2.	3
3.	3
4.	3.8
5.	3.6
6.	3.5
7.	3.6
8.	3.8
9.	3.3
10.	4
11.	3
12.	3.6

13.	3.6
100% of responses are more than 3 scale	
Level	3

Calculated Value for Indirect Assessment - 20% of 3= 20x3/ 100= 0.6

Overall Assessment of Attainment of Direct and Indirect Value= 2.4+0.6= 3

Matrix to Calculate the Attainment Score of M.Sc. Home Science

	Calculated Attainment					
		PO1	**PO2**	**PO3**	**PO4**	**PO5**
Average CO-PO mapped Value	3	**2**	**2**	**1.25**	**1.5**	**2.75**
Attainment Score		2X3/3 = 2	2X3/3 = 2	1.25X3/3 =1.25	1.5X3/3 = 1.5	2.75X3/3 = 2.75
Status of Attainment		**YES**	**YES**	**YES**	**YES**	**YES**

Action Plan for Attainment of CO-PO For the next year

1.	Enable learners communicate effectively and improve their standards of competence
2.	Improve quality, promote excellence and innovation, and increase autonomy

SEMESTER IV

M.Sc. FOOD & NUTRITION

M.Sc.-FN-405

Course Objectives

1. To familiarize with the applications of the above techniques.
2. To understand the principles of various analytical techniques available for nutrition research.
3. To apply the principles of various analytical techniques available for nutrition research.

Course Outcomes

1. To unable the students to learn the methods of assessment and plan the diet

2. Applications of nutritional sciences in clinical interventions, communication for health promotion, food service management, food science and processing

3. To acquire skills to undertake systematic research in the area of food science and nutrition

CO-PO Mapping course Outcomes of M.Sc.HS-405

Course Outcomes

	PO1	**PO2**	**PO3**	**PO4**	**PO5**
CO1	2	2	2	2	2
CO2	2	2	3	2	3
CO3	2	3	2	2	3
Total	6	7	7	6	**8**
Average of filled	**2**	**2.3**	**2.3**	**2**	**2.6**

M.Sc. Home Science FN Sem IV- 405

Direct Assessment

Total Number of Students	% of marks expected	Sessional	End Semester Exams
13	50	100% of students secured more than 50% of marks	100 % of students secured more than 50% of marks
Scored Attainment		**3**	**3**

Calculated Value for Direct Assessment-

Sessional- 30% of 3= 30x3/ 100= .9

University End Semester Exams- 70% of 3= 70x3/ 100= 2.1

Total Direct Assessment Value= 2.1+0.9 = 3

Overall Calculated Direct Assessment Value= 80% of 3= 80x3/ 100= 2.4

Indirect Assessment (Course Exit Survey on 5 scale)

M.Sc. Home Science FN II year- 1

Indirect Assessment (on 5 scale)

Total Student:-13

S.No.	Average score of Course Exit Survey(student wise)
1.	3.6
2.	3
3.	3
4.	3.8
5.	3.6
6.	3.5
7.	3.6
8.	3.8
9.	3.3
10.	4
11.	3
12.	3.1
13.	3.6
100% of responses are more than 3 scale	

Level	3

Calculated Value for Indirect Assessment - 20% of 3= 20x3/ 100= 0.6

Overall Assessment of Attainment of Direct and Indirect Value=2.4 +0.6= 3

Matrix to Calculate the Attainment Score of M.Sc. Home Science

Action Plan for Attainment of CO-PO For the next year

	Calculated Attainment					
Average CO-PO mapped Value	3	**PO1**	**PO2**	**PO3**	**PO4**	**PO5**
		2	**2.3**	2.3	2	2.6
Attainment Score		**2x3/3= 2**	**2.3x3/3= 2.3**	**2.3x3/3 =2.3**	**2x3/3=2**	**2.6x3/3=2.6**
Status of Attainment		**YES**	**YES**	**YES**	**YES**	**YES**

S.No.	
1	Strength strategic oversight and focus on delivery of instructions
2	Deliver appropriate infrastructure for learning environments

M.Sc. (F&N) Batch (2019-2021)						
S. No.	**Course Name**	**PO 1**	**PO 2**	**PO 3**	**PO 4**	**PO 5**
1	Research Methodology (M.Sc.-HS-101)	2	2	1.6	1.5	2.75
2	Advanced Nutritional Biochemistry (M.Sc.-FN-102)	1.5	1.75	2	1.75	2
3	Human Physiology (M.Sc.-FN-103)	1	1	2	1	
4	Advances in Food Microbiology (M.Sc.-FN-104)	2	2	1.25	1.5	2.75
5	Methods of Investigation (M.Sc.-FN-105)	2	2.3	2.3	2	2.6
6	Statistics and Computer Application (M.Sc.-HS-201)	2	2	1.6	1.5	2.75
7	Advance Nutrition (M.Sc.-FN-202)	1.5	1.75	2	1.75	2
8	Food Science (M.Sc.-FN-203)	1	1	2	1	
9	Food Packaging and Sensory Evaluation (M.Sc.-FN-204)	2	2	1.25	1.5	2.75
10	Current Trends & Issues in Food & Nutrition (M.Sc.-FN-205)	2	2.3	2.3	2	2.6
11	Dissertation (M.Sc.-FN-301)	2.5	2.5	2	2	3
12	Nutrition in Emergencies & Disaster (M.Sc.-FN-302)	3	2	1	1	2
13	Clinical and Therapeutic Nutrition (M.Sc.-FN-303A)	2.5	2.25	2	1.5	2
14	Institutional Food Management (M.Sc.-FN-304A)	2	1.6	2	2	
15	Assessment of Nutritional Status (M.Sc.-FN-305A)	2.5	3	2	2.5	2.5
16	Dissertation (M.Sc.-FN-401)	2	2	1.63	1.5	2.75
17	Internship (M.Sc.-FN- 402)	1.5	1.75	2	1.75	2
18	Scientific Writing (M.Sc.-FN- 403)	1	1	2	1	
19	Nutrition for Health & Fitness (M.Sc.-FN-404)	2	2	1.25	1.5	2.75
20	Pediatric Nutrition (M.Sc.-FN-405A)	2	2.3	2.3	2	2.6
	Average(Target Value)	1.90	1.93	1.82	1.61	2.49

S. No.	Course Name	Attainment	PO1	PO2	PO3	PO 4	PO 5
1	Research Methodology (M.Sc.-HS-101)	1.6	1.06	1.06	0.85	8	1.46
2	Advanced Nutritional Biochemistry (M.Sc.-FN-102)	1.6	0.8	0.93	1.06	0.93	1.06
3	Human Physiology (M.Sc.-FN-103)	3	1	1	2	1	
4	Advances in Food Microbiology (M.Sc.-FN-104)	3	2	2	1.25	1.5	2.75
5	Methods of Investigation (M.Sc.-FN-105)	3	2	2.30	2.30	2	2.6
6	Statistics and Computer Application (M.Sc.-HS-201)	3	2	2	1.6	1.5	2.75
7	Advance Nutrition (M.Sc.-FN-202)	3	1.5	1.75	2	1.75	2
8	Food Science (M.Sc.-FN-203)	3	1	1	2	1	
9	Food Packaging and Sensory Evaluation (M.Sc.-FN-204)	3	2	2	1.25	1.5	2.75
10	Current Trends & Issues in Food & Nutrition (M.Sc.-FN-205)	3	2	2.3	2.3	2	2.6
11	Dissertation (M.Sc.-FN-301)	1.88	1.56	1.56	1.25	1.25	1.88
12	Nutrition in Emergencies & Disaster (M.Sc.-FN-302)	3	3	2	1	1	2
13	Clinical and Therapeutic Nutrition (M.Sc.-FN-303A)	1.88	1.56	1.41	1.2	0.94	1.25
14	Institutional Food Management (M.Sc.-FN-304A)	3	2	1.6	2	2	
15	Assessment of Nutritional Status (M.Sc.-FN-305A)	3	2.5	3	2	2.5	2.5
16	Dissertation (M.Sc.-FN-401)	3	2	2	1.63	1.5	2.75
17	Internship (M.Sc.-FN- 402)	3	1.5	1.75	2	1.75	2
18	Scientific Writing (M.Sc.-FN- 403)	3	1	1	2	1	
19	Nutrition for Health & Fitness (M.Sc.-FN- 404)	3	2	2	1.25	1.5	2.75
20	Pediatric Nutrition (M.Sc.-FN-405A)	3	2	2.3	2.3	2	2.6
	PO Attainment through Results	2.75	1.72	1.75	1.66	1.83	2.23
	80 % of PO Attainment through results (A)		1.38	1.40	1.33	1.46	1.79
	Alumni Survey		2.23	2.15	1.69	1.84	2.15

	10 % of Alumni Survey (B)	0.223	0.215	0.169	0.184	0.215
	Employer/ Professional Survey	2.75	2.25	2.5	3	2.5
	10 % of Employer Survey (C)	0.275	0.225	0.25	0.3	0.25
	PO Attainment Value A+B+C	1.88	1.84	1.75	1.95	2.25
	Target Value	1.90	1.93	1.82	1.61	2.49
	Gap Value	-0.02	-0.09	-0.07	0.34	-0.24

PO	Gap Value	strategies
PO1	-0.02	Enable students to communicate effectively and improve their standard of competence by encouraging students to give presentations and cross-questioning.
PO2	-0.09	Improve quality, promote excellence and innovation and increase autonomy.
PO3	-0.07	Deliver appropriate infrastructure for learning environment and make student a part of mock field work e.g. conducting advocacy programs.
PO5	-0.24	Increase the use of AV aids in explaining the concepts of the subject matter to the students