

UNIVERSITY OF MUMBAI



Program: B.Sc.

Course: Interdisciplinary Sciences with Home Science

(Branch I: Foods, Nutrition and Dietetics)

(Credit Based Semester and Grading System
with effect from the academic year 2014–2015)

Preamble

Home Science, a part of the Faculty of Sciences, is an inherently interdisciplinary sphere of knowledge. An education in Home Science contributes to the holistic development of individuals, especially designed for young women. Home Science education is life oriented, career oriented and community oriented. The Ad-hoc Board of Studies in Home Science presents the modules for B.Sc. (Interdisciplinary Sciences with Home Science) that will be offered to students who enrol for the B.Sc. (Interdisciplinary Sciences with Home Science). The purpose is to increase access to basic home science education for students across varied science faculties by imparting life-, career and community oriented skills to face challenges in life. Since Home Science is composed of four different specializations namely Foods Nutrition and Dietetics, Human Development, Textile and Fashion Technology and Community Resource Management, two home science modules under each specialization (i.e. eight modules) are being proposed that can be offered across the first four semesters. The following are the two modules under the Branch I: Foods Nutrition and Dietetics.

| Module Code | Title | Internal Assessment | Semester End Examination | Total marks | Credits |
|--|--|----------------------------|---------------------------------|--------------------|----------------|
| BRANCH I: FOODS & NUTRITION | | | | | |
| USIDHSI1 | FOOD SCIENCE & PRESERVATION | 40 | 60 | 100 | 3 |
| USIDHSI2 | NUTRITION & DIETETICS | 40 | 60 | 100 | 3 |

| Module Code | Title | Internal Assessment | Semester End Examination | Total marks | Credits |
|-------------|--|---------------------|--------------------------|-------------|---------|
| USIDHSI1 | FOOD SCIENCE & PRESERVATION | 40 | 60 | 100 | 3 |

Objectives

- To acquire knowledge of various concepts of Food Science, its facts and principles
- To develop the ability to select and apply the principles to practical situations.

| Unit | Contents | Periods | Credits |
|------------|---|-----------|----------|
| I | Concept of Food Science: Nutrition and Nutrients Food Groups Elementary Food Chemistry: Carbohydrates (starches and sugars), Lipids and Proteins Effects of processing on the following: Flesh foods (meat, fish, egg, poultry) Milk and milk products Fruits and Vegetables Nuts, fats and oils Sugars and artificial sweeteners | 15 | 3 |
| II | Moist Heat and Dry Heat Methods of Cooking Physical and Chemical changes occurring in foods during various cooking methods | 15 | |
| III | Concept of Food Preservation Basic principles of preservation in brief heat preservation, cold preservation, dehydration and concentration, fermentation, food irradiation and use of food additives | 15 | |

References

- Manay, Shakuntala N.; Shadaksharaswamy M. (1995) Food; Facts & Principles New Age International (P) Ltd.: New Delhi.
- Khanna K. & Gupta S. (2001) The Art and Science of Cooking: A Practical Manual, Phoenix Publishing House Pvt. Ltd.: New Delhi.

| Module Code | Title | Internal Assessment | Semester End Examination | Total marks | Credits |
|-------------|-----------------------|---------------------|--------------------------|-------------|---------|
| USIDHSI2 | NUTRITION & DIETETICS | 40 | 60 | 100 | 3 |

Objectives

- To enable students to understand the relation of nutrition to health.
- To enable students to understand functions, sources, requirements and effects of deficiency of nutrients.
- To enable students to understand digestion, absorption and metabolism of nutrients.

| Unit | Contents | Periods | Credits |
|------|--|---------|---------|
| 1 | Concept of Balanced Diet, Macro and Micro nutrients Functions Requirements of various macro and micro nutrients Effects of Deficiency | 15 | 3 |
| 2 | Introduction to Meal Planning and Exchange List Guidelines for infants, preschoolers, children and adolescents | 15 | |
| 3 | Importance of balanced diet and basic diet planning guidelines to be followed for physiological conditions during adulthood, old age and pregnancy & lactating periods | 15 | |

References:

Srilakshmi, B (2003) Nutrition Science, New Age International Ltd.

Bamji, M., PrahladRao, N & Reddy, V(1996) Text book of Human Nutrition, Oxford & TBH Publishing Co. PVT Ltd

ICMR, (1998) Nutrient Requirements and recommended dietary allowances for Indians- A report of the expert group of ICMR, NIN, Hyderabad

Whitney & Ross (2002) Understanding Nutrition, Wadsworth/ Thomson Learning.: Belmont, Ca.

Swaminathan, M (1998) Essentials of Food and Nutrition, 2nd Ed, Vol I&II, Bangalore.

Scheme of Examination

The performance of the learners shall be evaluated into two parts. The learner's performance shall be assessed by Internal Assessment (40% marks) and by conducting the Semester End Examinations (60% marks). The allocation of marks for the Internal Assessment and Semester End Examinations are as shown below:-

Internal assessment for Theory 40 %

| Sr. No. | Evaluation type | Marks |
|----------------|--|--------------|
| 1 | One class test/ case study / online examination to be conducted in the given semester | 20 |
| 2 | One assignment based on curriculum to be assessed by the teacher concerned | 10 |
| 3 | Active participation in routine class instructional deliveries | 05 |
| 4 | Overall conduct as a responsible learner, communication and leadership qualities in organizing related academic activities | 05 |

Semester End Theory Examination of 60 marks (three unit courses)

Duration: These examinations shall be of two and half hours duration.

Theory question paper pattern:

- There shall be four questions each of 15 marks. On each unit there will be one question and first question will be based on entire syllabus.
- All questions shall be compulsory with internal choice within the questions. Each question will be of 30 marks with options.
- Questions may be sub divided into sub questions as a, b, c, d and e, etc and the allocation of marks depends on the weightage of the topic.

Standard of Passing is as per the ordinances set by the University of Mumbai for the Credit based Semester and Grading System for the undergraduate courses.

The course and its content is prescribed, as per the directives of the Faculty of Science, by the Members of the Ad-hoc Board of Studies in Home Science, affiliated by the University of Mumbai and by the steering committee of Dr. Vishaka Karnad Chairperson, Ad-hoc Board of Studies in Home Science, Dr. Perpetua Machado (Principal), Dr. Geeta Ibrahim (Head, Branch I: Foods Nutrition and Dietetics, Dr. Anuradha Bakshi (Head, Branch II: Human Development), Dr. Ela Dedhia (Head, Branch III: Textile and Fashion Technology) Ms. Sunita Jaiswal (Coordinator, Branch IV: Community Resource Management)