

UNIVERSITY OF MUMBAI



Syllabus for the Bridge Course in Home Science (leading to M. Sc. in Home Science)

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

Bridge Course in Home Science

Preamble

Under the Master's Programme in Home Science there are four specializations of Branch IA: Foods, Nutrition and Dietetics, Branch IB: Food Processing and Preservation, Branch IC: Sports Nutrition, Branch II: Human Development, Branch III: Textile and Fashion Technology and Branch IV: Community Resource Management.

College of Home Science, Nirmla Niketan Bridge Course provides a route into the postgraduate courses. It is the first step on the way to successfully obtaining the Master's degree. The course is designed for Indian and International students whose graduate qualifications fulfill the eligibility criteria for the Home Science postgraduate courses. Each application will be considered individually by the Course Coordinators, Heads of Specializations, the Principal and the Academic Adviser for the course within the College. The process of organizing the course is the responsibility of the college management and academic bodies within the college constituted for it. It will be organized as a self-financed value added course.

If a learner does not have the suitable subject background for direct entry to first year Master's level, or he/she has not studied the relevant subjects in the required depth then he/she might need to undertake a bridging course to bring the skills and knowledge of the learner to in level with graduate learners from our institute.

This course will enable aspirant students who have sought admission for M.Sc. (Home Science Courses). It will equip candidates with relevant knowledge and skills to help them cope with curriculum of the Master's programme under the respective branches. The course is open to all M.Sc. registered students (non-home science and home science students from other universities eligible for the Master's Home Science programmes) who wish to avail of this opportunity of gaining the basics of Home Science in the chosen field of the specializations.

The program is a one semester program (10 weeks, plus orientation and exam week) offered internally partially online in the first semester for maximum convenience. Some assignments may have to be submitted/ sent to the college for assessment.

HOW WILL THIS PROGRAM HELP THE LEARNER?

When the learner completes the program successfully, he/she will be able to effectively manage his/her academic progress for the Master's Program. When the learner applies for the course the final grade will be calculated on the basis of the scores and credits earned on submission of assignments and tests completed (online/offline). It will help him/her to develop the basic competency for studying the Master's Programme. However, the score for this bridging course will not be considered for the Master's Programme while granting the M.Sc. (Home Science) Degree. It is considered to be a value addition programme. The course will be recognized by College of Home Science and the University of Mumbai.

On completion, as a learner you will be able to learn independently about information and concepts (ideas) in the disciplines of Home Science, describe the roles of relevant systems, key concepts, communicate and present information in an informed manner.

HOW DOES ONE APPLY?

Information about how to apply is available from the website _____

Recognition of prior learning is determined by an academic adviser during enrolment.

HOW MUCH WILL IT COST?

The program has a nominal fee and the learner is expected to buy essential study materials such as stationery and raw materials as prescribed for each module, as and when specified. The learners must have access to a reliable internet connection.

Method	Registration Fee (INR)	Program Fee (INR)	Total Fee (INR.)
Lump sum Payment Scheme (Along with the filled up application)	2,000	3,000	5,000

Note: Students residing outside India need to pay an additional fee of Rs.3000/-

WHAT IS PROVIDED?

Students will be provided with course lecture notes and manual of instructions for practical where applicable, list for additional reading. There will be opportunities for practical experience in laboratories, if needed which will be notified to the candidates prior to conducting the sessions.

HOW TO ENROLE?

Register at website link _____

Closing date for online registration is one week before course commencement. However, we encourage you to register early as places are limited. Payment is available via credit card or demand draft in favor of _____

For more information about BCHS, please visit: _____

HOW DOES THE LEARNER COMPLETE THE PROGRAM?

The program consists of two modules (six credits each) for each specialization (twelve credits for the two modules under the chosen field of specialization of Foods Nutrition and Dietetics, Human Development, Textile and Fashion Technology or Community Resource Management). Each module is designed for earning 6 credits and the learner must pass each unit under the selected module to successfully complete the program. Each module consists of three units for two credits each). All teaching and learning sessions may be executed online or offline as required by the course instructor.

Module Code	Title	Final Test	Continuous Assessment	Total marks	Credits
FOODS & NUTRITION					
PSBRHSI1	BASIC NUTRITION	20	30	50	6
PSBRHSI2	FOOD SCIENCE & BASIC MEAL PLANNING	20	30	50	6
HUMAN DEVELOPMENT					
PSBRHSII1	THEORIES OF HUMAN DEVELOPMENT	20	30	50	6
PSBRHSII2	SPECIALIZED TOPICS IN HUMAN DEVELOPMENT	20	30	50	6
TEXTILES AND FASHION TECHNOLOGY					
PSBRHSIII1	PRODUCT DESIGN	20	30	50	6
PSBRHSIII2	PRODUCT MAKING	20	30	50	6
COMMUNITY RESOURCE MANAGEMENT					
PSBRHSIV1	INTRODUCTION TO MANAGEMENT PROCESS	20	30	50	6
PSBRHSIV2	INTRODUCTION TO ERGONOMICS MAN- MACHINE ENVIRONMENT SYSTEM	20	30	50	6
TOTAL MARKS FOR THE TWO MODULES UNDER EACH SPECIALIZATION		<u>40</u>	<u>60</u>	<u>100</u>	<u>12</u>

Module Code	Title	Marks	Credits
PSBRHS11	BASIC NUTRITION	50	6

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	Credits
1	Energy Units and Determination of energy value of food Bomb calorimetry, Physiological fuel value, Benedict's Oxy calorimeter, BMR, REE, TEF Determination of energy requirements, RDA, Reference man, Reference woman Macronutrients: Classification, Functions, Digestion, Absorption, RDA & Deficiency (Important concerns) for Carbohydrates	2
2	Macronutrients: Classification, Functions, Digestion, Absorption, RDA & Deficiency (Important concerns) for Proteins and for Lipids Vitamins (Fat & Water soluble) and Minerals (Macro, Micro & Trace minerals) Micronutrients: Functions, Sources, Deficiency, Toxicity, RDA	2
3	Clinical signs Anthropometry Biochemical tests Diet surveys	2

References:

- Srilakshmi, B (2003) Nutrition Science, New Age International Ltd.
Bamji, M., Prahlad Rao, N & Reddy, V.(1996) Text book of Human Nutrition, Oxford & TBH Publishing Co. PVT Ltd
Whitney & Ross (2002) Understanding Nutrition, Wadsworth/ Thomson Learning: Belmont, CA.
Swaminathan, M (1998) Essentials of Food and Nutrition, 2nd Ed, Vol I&II, Bangalore printing and publishing

Module Code	Title	Marks	Credits
PSBRHS12	FOOD SCIENCE & BASIC MEAL PLANNING	50	6

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	Credits
1	A. Composition & Effect of processing on various foods B. Basics of Meal planning Food groups:- Cereals, Pulses, Fruits & vegetables, Eggs, Meat, Fish & poultry, Milk Fats, Oils & Sugars	2
2	Introduction to Food Exchange Lists	2
3	Introduction to Meal Planning: Age groups including infancy, early childhood, late childhood, adolescent, adulthood, old age, pregnancy and lactating periods	2

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	Marks	Credits
PSBRHSIII	THEORIES OF HUMAN DEVELOPMENT & COUNSELLING	50	6

Objectives

- To have students value the role of theories in comprehending human behaviour and development.
- To facilitate in students an understanding of the theories in human development and their application in day-to-day life.

Unit	Contents	Credits
1	Theories of Human Behaviour and Development Introduction Freud's Psychosexual Theory Erikson's Psychosocial Theory Pavlov's Classical Conditioning Skinner's Operant Conditioning	2
2	Theories of Human Behaviour and Development Bandura's Social Cognitive Theory Piaget's Cognitive Development Theory Kohlberg's Moral Development Theory Bronfenbrenner's Ecological Theory	2
3	Counselling Theories/Approaches Roger's Person-Centered Counselling SFBC Group Counselling Axline's Play Therapy Satir's Family Therapy Jiva Model of Career Counselling Gysber's School Counselling Model	2

References:

- Baldwin, A.(1980). Theories of child development. New York: Wiley.
CA: Brooks/Cole.
- Capuzzi, D., & Gross, D. A. (1999).*Counseling and psychotherapy.Theories and interventions*.NJ: Prentice-Hall.
- Corey, G. (2004). *Theory and practice of group counseling*.Pacific Grove, CA: Brooks/Cole.
- Erikson, E. H. (1963). Childhood and society. New York: W.W. Warton.
- George, R. L., & Cristiani, T. L. (1995).*Counseling: Theory and practice*. Boston: Allyn & Bacon.
- Gibson, R. L., & Mitchell, M. H. (1999).*Introduction to counseling and guidance*. New Jersey: Prentice-Hall.
- Green, M. (1989). Theories of human development: A comparative approach. New Jersey: Prentice Hall.
- Hjelle, L. A., & Ziegler, D. J.(1992). Personality theories: Basic assumptions, research and application. New York:
- Hornby, G., Hall, C., & Hall, C. (2003).*Counseling pupils in schools: Skills and strategies for teachers*. London:
- Kotler, J. A. (2004). *Introduction to therapeutic counseling.Voices from the field* (5th edition).Pacific Grove,
- Lakshmi, K. S. (2000). *Encyclopedia of guidance and counselling* (4th volume).New Delhi: Mittal.
McGraw Hill.
- Routledge-Falmer.
- Thomas, M. (2000).Comparing theories of child development.(5th Ed.). California: Belmont
- Thompson, C., Rudolph, L. B., Henderson, D. (2004). *Counseling children*. Australia: Brooks/Cole.

Module Code	Title	Marks	Credits
PSBRHSII2	SPECIALIZED TOPICS IN HUMAN DEVELOPMENT	50	6

Objectives

- To introduce students to planning developmentally-appropriate activities which promote holistic development in early childhood
- To introduce students to key concepts in counseling, psychological testing and assessment.
- To help students develop an awareness and concern for exceptional children, their needs and problems.
- To be sensitized to the dynamics in family relations.

Unit	Contents	Credits
1	Early Childhood Care and Education NAEYC Developmentally-Appropriate Practices Play and the Young Child Curriculum Planning Language, science, and maths activities Social studies, music and movement, art and craft Fine and gross motor development activities	2
2	Assessment Intelligence Testing Creativity Testing Personality Assessment Infant and Toddler Developmental Assessment Special Needs Persons with Special Needs Intellectually Differently-abled Learning Disabilities Physical and Health Disabilities	2
3	Family Studies Family Life Cycle Marital Dyad Parent-Child Relationships Family and Work Alternate Lifestyles	2

References:

- Essa E.L. (2003) Introduction To Early Childhood Education (4th ed).
- Barbour, S.(1993) Early Childhood Education. An Introduction (2nd ed).
- Gestwicki, C. (1999) Developmentally Appropriate Practices Curriculum And Development In Early Education (2nd Ed.).
- Leeper.S.,& Witherspoon, R.(1984).Good Schools For Young Children.
- Brewe.J. (1998).Introduction to Early Childhood Education Preschool through Primary Grade (3rd Ed.).
- Amin, R. (1997). Learning for life...from birth to five. Nurturing the growing child. Mumbai: Books for Change.
- Catron, C., & Allen, J. (1993). Early childhood curriculum. New York: Macmillan.
- Children's Christian Fund. (1994). Early childhood care and development (0 to 6 years). Trainers' manual. India: Author.
- Dopyera, M., & Dopyera, J. (1993). Becoming a teacher of young children. New York: McGraw Hill.
- Ebastian, P. (1986). Handle with care--A guide to early childhood administration. Melbourne: AE Press.
- Kaul, V. (1991). Early childhood education programme. New Delhi: NCERT.
- NCERT.(1996). Minimum specifications for preschools. New Delhi: Author.
- Swaminathan, M. (1998). The first five years—A critical perspective on early childhood care and education in India. New Delhi: Sage.

Journals

Childhood Education, Parenting, Young Children

Module Code	Title	Marks	Credits
PSBRHSIII1	PRODUCT DESIGN	50	6

Objectives

- To help students interpret design, ideas through research on design events, activities and issues.
- To enable students to develop a strategic perspective on influences of lifestyle and design on each other.
- To provide an opportunity to the students to acquire familiarity of organizational practices to set career and professional goals for oneself.

Unit	Contents	Credits
1	Introduction to Computer Aided Designing (CAD) Overview of selection tools (Corel Draw) Figure drawing Motif generation, repeats and layouts	2
2	Introduction to product design Elements and Principles of Design Overview of selection tools (Photoshop) Understanding layers Understanding color modes Working with type Preparing to publish	2
3	Draping of different silhouettes Fabric Manufacturing	2

References

Bain, Steve, (2001). CorelDraw 10: An Official Guide, Berkeley, CA, Osborne/McGraw-Hill
 Adobe Photoshop 60 – Classroom In A Book (2001) Addison Wesley, Longaman (Singapore) Pte.Ltd.
 Joyce Carol (2000). Textile Design, Watson Guptill Publications: New York.
 Tate, S. L. (2004), Inside Fashion Design Pearson Education INC: Singapore

Module Code	Title	Marks	Credits
PSBRHSIII2	PRODUCT MAKING	50	6

Objectives

- To learn the basics of computerized pattern making, grading and garment production technology

Unit	Contents	Credits
1	Introduction to Computer aided manufacturing (CAM) CAD systems Pattern construction Computer pattern grading systems	2
2	Application of Computer Aided Manufacturing (CAM) for product execution Pattern modification for size, fit and style Marker making and lay-out planning	2
3	Basic processes of garment production technology Production data management systems	2

References

Fischer, A. (2009) Basics of Fashion Design, AVA Publishing: UK
 Batty, J. (1975). *Industrial administration and management*. (3rd Ed.) London: The English language book society and McDonald and Svans.
 Claire, B. (1981). *The complete book of sewing shortcuts*. New York: Sterling publisher
 Dani, L. M. (1990). *Industrial organization and management*. Bombay: Manan publisher
 Kallal, M. (1985). *Clothing construction*. London: Macmillan Publishing Co. Inc.
 Kale, N. G. (1997). *Management and human resource development*. (6th Ed.) Mumbai: Manisha.

Michael, V. and Paralkar, V. (1997). *The editors of times-life books*, Netherlands: Time-life B. V. International.
 Mehta Pradir V. (1992) *An introduction to quality control for the apparel industry*. ASQC. Quality Press, Marcel Dekker, Inc. Milwackee, New York, Dasel, Hongkong.

Module Code	Title	Marks	Credits
PSBRHSIV1	INTRODUCTION TO MANAGEMENT PROCESS	50	6

Objectives

- To understand and study the effective use of resources
- To develop an understanding of human values, goals and standards
- To facilitate understanding of concepts such as motivation, leadership & team work.

Unit	Contents	Credits
1	Resources: Definition, Characteristics, Classification, iv. Guidelines for effective use of resources Management of Time: Types of Time, Philosophy and attitude towards time, Time plans and tools of time management Systems Approach in Management	2
2	Human energy as a resource: Energy demands for different activities and Energy Expenditure Fatigue: Meaning, Types of fatigue, Remedies Work simplification: definition, importance, techniques Communication: Meaning and nature of communication, Communication structures Barriers to effective communication Group Dynamics: Concept of group dynamics, Managerial model of work groups Motivating: Definition, Theories of motivation: Maslow's need hierarchy, Herzberg's theory motivation, David McClelland's theory, Incentives and Recognition, Benefits of motivation	2
3	Other resources: Money, Human Resources, Materials and Information Technology and their use in management Concepts of Quality Management Meaning and importance of Quality management Fundamentals TQM, JIT, quality assurance, quality circles Current trends in Quality management	2

References

Bank, J. (1996). *The essence of Total Quality Management*, New Delhi: Practice Hall of India Pvt. Ltd.
 Bother, D. (1994). *Communicate with confidence*, McGraw Hill Inc, New York
 Drucker, P. (1975). *The practice of Management*. Allied Publishers Pvt. Ltd. Bombay
 Mundel, M. E. (1990). *Motion & Time Study, Principles & Practice*, Prentice Hall Inc., New Delhi
 Pike, J. & Barheo, R. (2001) *TQM in Action*, Clespur and Hall
 Mukherjee P.N. (2009) *Total Quality management*, PHI Learning Pvt. Ltd

Module Code	Title	Marks	Credits
PSBRHSIV2	INTRODUCTION TO ERGONOMICS MAN- MACHINE ENVIRONMENT SYSTEM	50	6

Objectives

- To introduce students to the concept and essential components of Ergonomics.
- To provide students with ergonomic applications in home, office and industry.

Unit	Contents	Credits
1	Introduction: Man – Machine – Environment System Time and Motion Studies Anthropometrics	2

	Work Space Design	
2	Posture and Workload and Physiological Aspects of Work Biomechanics, Fatigue Muscular Work, Work Efficiency, Measurement of the Human Cost of Work, Sources of energy	2
3	Environmental Factors Illumination, Noise and Vibration, Chemical and Biological Hazards Indoor Climate, Heat & Cold Stress, Ventilation, Effect on Health with applications in Home, Office and Industry	2

References

- Bridger. R.S. (2003). Introduction to Ergonomics. Taylor and Francis Ltd. Great Britain.
- Chauhan. M. K. (2002). Ergonomics Practical Manual. SVT College of Home Science, Mumbai.
- Dalela S. and Saurabh. (1987). Textbook of Work Study and Ergonomics. (4th ed). Standard Publishers. Delhi.
- Gandotia. V., Oberoi K. and Sharma. P. (2005). Essentials of Ergonomics, Dominant Publishers and Distributors. New Delhi.
- Kong. S. and Johnson. S. (2000). Work Design: Industrial Ergonomics, Holcomb Hathway. Arizona.
- Kroemer. K.H.E and Grandjean E. (1997). Fitting the Task to the Human: A Textbook of occupational Ergonomics Taylor and Francis Ltd. London.
- Pheasant. S. (1996). Bodyspace: Anthropometry, Ergonomics and the Design of Work (2nd ed.). Taylor and Francis Ltd. London.
- Stanton. N., Hedge. A., Brookhirs K. and Sales. E. (2005). Handbook of Human Factors and Ergonomics, CRC Press. Florida.
- Weerdmaster Dul Jam. B. (2001). Ergonomics for Beginners: A Quick Reference Guide. Taylor and Francis Ltd. London
- Wilson J. R. and Corbett E. N. (1995). Evaluation of Human Task: A Practical Ergonomics Methodology. (2nd ed.) Taylor and Francis (Ltd). London.

Scheme of Examination

Theory Modules:

Project work on one topic of relevance will be assigned by the course instructor (one for every module) (30 marks)

S. No.	Criteria for Marking	Marks assigned
1.	Review of literature (not including the notes provided)	10
2.	Conceptual learning by the learner (application based)	10
3.	Presentation (content, language, objectivity, accuracy and precision)	10

Final test papers (to be framed and administered by the Course Instructor) during the program (20 marks)

S. No.	Criteria for Marking	Marks assigned
1.	Multiple choice questions	20

Practical Modules:

Samples/exercises/assignments/portfolios/journals/ plans will submitted to the course instructor in college (50 marks)

S. No.	Criteria for Marking on the quality of work produced	Marks assigned
1.	Regularity & Accuracy	10
2.	Creativity & Neatness	10
3.	Presentation (Product)	30

Learners may have to attend few practical sessions and test evaluations for laboratory work, if required in-order to facilitate the practical exposure and its assessment for select units if prescribed.

Notices regarding submission dates and other related information will be posted on the website. Communication will be done online.

Grade cards on the successful completion will be issued by the college online.

Information in this publication is with effect from 2014-2015 but may be subject to change as recommended by the academic bodies. The course details, content may undergo changes considering feasibility and during the working of operational logistics as it may be customized to the need of candidates who enroll for the Masters' in Home Science Programme.

The course and its content is prescribed by the Members of the Ad-hoc Board of Studies in Home Science, affiliated by the University of Mumbai, under 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) in the March 2014.