

As Per NEP 2020

University of Mumbai



Syllabus for Basket of OE Life Sciences	
Board of Studies in Life Sciences	
UG First Year Programme	
Semester II	
Title of Paper	Credits 2/ 4
I) Health and Wellness	2
From the Academic Year	2024 – 2025

I. Name of the course: Life Sciences - Health and Wellness

Sr.No.	Heading	Particulars	
1	Description the course : Including but Not limited to:	Health and Wellness: This course aims to engage the learner with the aspects of health, not just physical but also mental and spiritual health. The course aims to guide the students to have a lifestyle for better health and make them aware of the ill effects of bad management of health. They will get to know about nutrition for health.	
2	Vertical :	Open Elective	
3	Type :	Theory	
4	Credits :	2 credits (1 credit = 15 Hours for Theory)	
5	Hours Allotted :	30 hours	
6	Marks Allotted:	50 Marks	
7	Course Objectives(CO): The course aims to: CO1 To be well versed with health and wellness and understand the dimensions of the health. CO2 To be able to understand the importance of biomolecules, micro and macronutrients ,energy content of food and calories requirements of the body. CO3 To understand the risk factors and understand the role of happy hormones in maintaining health and wellness.		

8	Course Outcomes (OC): The learner would be able to: OC 1. To understand the importance of energy content of food and energy requirement and role of macro and micronutrients OC 2. To understand the importance of food nutrition and excessive supplements caused harm to the body. OC 3. To understand concept of RDA OC 4. To understand risk factors of health and wellness.	
9	Module 1- Health	Lectures 15

	Introduction to Health. 1. Dimensions of health. a. Physical b. Mental c. Emotional d. Social e. Spiritual 2. Risk factors are actions or conditions that increase a person's risk of illness or injury. a. Smoking (active smoking and passive smoking), b. Drinking eg Lung Cancer, c. unprotected sex causes AIDS and VDRL diseases. 3. Role of Nutrition in maintaining health. a. Macronutrients and micronutrients b. Energy content of food- calorific value of different biomolecules c. Measurement of energy expenditure- Basal Metabolic Rate- Definition, factors affecting BMR & its significance 4. Specific dynamic action of food- Definition, Mechanism & its significance: a. Carbohydrates: Concept of Glycemic Index of food, Importance of fiber (Complex carbohydrate) in nutrition b. Lipids-Role of essential fatty acids c. Proteins- Essential amino acids, Nitrogen Balance d. Recommended Dietary allowances (RDA) e. Macro-elements and Microelements 5. Excessive intake of nutrition: Vitamins and minerals. a. Calcium – kidney stones b. Vitamins –Vitamin D toxicity, c. Aluminium – Neurotoxin may cause dementia.	1 4 2 4 3
	Module 2- Wellness	15

	1. Introduction to wellness 2. Types of wellness: a. Physical wellnes b. Intellectual wellness c. Emotional wellnessd. d. social wellnesse. e. Spiritual wellness. f. Environmental 3. Similarity and differences between Health and Wellness 4. Risk factors of wellness a. Physical inactivity b. Lifestyle disorders like diabetes and Excessive alcohol and tobacco) c. Sleep disruption (Stress, anxiety or excess use of TV and mobile) and role of melatonin sleep hormone in sleep d. Poor nutritional habits. Social isolation : Stress, Anxiety, depression etc. 5. Role of Neurotransmitters and happy hormones to maintain wellness: a. Dopamine, b. Oxytocin c. Serotonin.	1 5 2 5 2
10 and 11.	Text and Reference Books: 1. Principles of Nutritional Assessment (2005) Rosalind Gibson. Oxford University Press. 2. Nutritional Biochemistry: Tom Brody, 2 Ed, 1999 3. Health and Nutrition	
12	Internal Continuous Assessment: 40%	Semester End Examination: 60%

13	Continuous Evaluation through: Quizzes, class test, presentation, project, role play, creative writing, assignment etc.: 15 marks Attendance and Participation: 05 marks. Total 20 marks.	Theory evaluation: 30 marks.	
14	Format of Question Paper: Details given at the end of the document.		

Evaluation for Open Elective Course: 50 Marks

The evaluation of these courses would include continuous evaluation (internal assessment) and Semester end examinations (External assessment). The evaluation pattern would be as follows:

Internal Assessment: 20 marks.

Quizzes, class test, presentation, project, role play, creative writing, assignment etc: 15 marks.

Attendance and Participation: 05 marks

External Assessment: 30 marks.

Theory Component: 30 marks.

- Duration: **1 Hour**
- Theory question paper pattern:

Question No.	Unit	Question	Marks
Q1.	I	Any 1 out of 2 (1 or 1a, b)	12
Q2	II	Any 1 out of 2 (2 or 2a, b)	12
Q3.	I and II	Any 2 out of 4 (3: a, b, c, d)	06
		Total	30

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