

As Per NEP 2020

University of Mumbai



Title of the program

- A- U.G. Certificate in **Microbiology**
- B- U.G. Diploma in **Microbiology**
- C- B.Sc. (**Microbiology**)
- D- B.Sc. (Hons.) in **Microbiology**
- E- B.Sc. (Hons. with Research) in **Microbiology**

Syllabus for

Semester – Sem I & II

Ref: GR dated 20th April, 2023 for Credit Structure of UG

(With effect from the academic year 2024-25
Progressively)

University of Mumbai



(As per NEP 2020)

Sr. No.	Heading	Particulars	
1	Title of program O: _____A	A	U.G. Certificate in Microbiology
	O: _____B	B	U.G. Diploma in Microbiology
	O: _____C	C	B.Sc. (Microbiology)
	O: _____D	D	B.Sc. (Hons.) in Microbiology
	O: _____E	E	B.Sc. (Hons. with Research) in Microbiology
2	Eligibility O: _____A	A	HSC OR Passed Equivalent Academic Level 4.0
	O: _____B	B	Under Graduate Certificate in Microbiology OR Passed Equivalent Academic Level 4.5
	O: _____C	C	Under Graduate Diploma in Microbiology OR Passed Equivalent Academic Level 5.0
	O: _____D	D	Bachelors of Microbiology with minimum CGPA of 7.5 OR Passed Equivalent Academic Level 5.5
	O: _____E	E	Bachelors of Microbiology with minimum CGPA of 7.5 OR Passed Equivalent Academic Level 5.5

3	Duration of program R: _____	A	One Year
		B	Two Years
		C	Three Years
		D	Four Years
		E	Four Years
4	Intake Capacity R: _____	120 per division	
5	Scheme of Examination R: _____	NEP 40% Internal 60% External, Semester End Examination Individual Passing in Internal and External Examination	
6	R: _____ Standards of Passing	40%	
7	Credit Structure Sem. I - R: _____A	Attached herewith	
	Sem. II - R: _____B		
	Credit Structure Sem. III - R: _____C		
	Sem. IV - R: _____D		
8	Semesters	Credit Structure Sem. V - R: _____E	
		Sem. VI - R: _____F	
		A	Sem I & II
		B	Sem III & IV
		C	Sem V & VI
		D	Sem VII & VIII
		E	Sem VII & VIII

		A	4.5
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9	Program Academic Level	B	5.0
		C	5.5
		D	6.0
		E	6.0
10	Pattern	Semester	
11	Status	New	
12	To be implemented from Academic Year Progressively	From Academic Year: 2024-25	

**Sign of the Offg. Dean
Prof. Shivram S. Garje
Faculty of Science &
Technology**

**Sign of the
Offg. Associate Dean
Dr. Madhav R. Rajwade
Faculty of Science &
Technology**

**Sign of the Offg. Dean
Prof. Shivram S. Garje
Faculty of Science &
Technology**

Preamble

1. Introduction

The National Education Policy 2020 i.e. NEP 2020 is a comprehensive education policy introduced by the Government of India in July 2020. It aims at producing engaged, productive, and contributing citizens for building an equitable, inclusive, and plural society as envisaged by our Constitution.

Microbiology is a study of the microscopic world. It is an indispensable part of our routine life. It is the branch of science which deals with study of microorganisms with the emphasis on their morphology, biochemistry and industrial applications in diverse fields.

2. Aims and Objectives

The B. Sc (Microbiology) program is designed to provide learners with an experiential learning of the principles, concepts, skills and scope of the subject in day-to-day life as well as in the industry and research.

The objectives are:

- to develop deeper interest in the subject to progress to higher education.
- to sharpen learners' creativity, analytical thinking skills, and logical reasoning.
- to inculcate a scientific temper.
- to acquire skill sets to make them industry ready and independent researchers.

3. Learning Outcomes

On completion of this program the learners will be able to

- apply their knowledge to interdisciplinary sciences in higher education.
- contribute as an efficient professional to an industry as well as research laboratories.
- spread awareness about the importance of Microbiology to the society at local and global level.

5) Credit Structure of the Program (Sem I, II, III, IV, V & VI)

Under Graduate Certificate in Microbiology

Credit Structure (Sem. I & II)

	R:_____A										
Level	Semester	Major		Minor	OE	VSC, SEC (VSEC)	AEC , VEC , IKS	OJT, FP, CEP , CC, RP	Cum. Cr. / Sem.	Degree/ Cum . Cr.	
		Mandatory	Electives								
4.5	I	6 <u>Course I</u> Fundamentals of Microbiology <u>Course II</u> Basic techniques in Microbiology <u>Course III</u> Practical in Microbiology I Practical techniques: Staining and Control of Microorganisms	-	-	2+2 Microbes at work	VSC:2 (Practical based) Techniques in Nutrition , Cultivation and Preservation of Microorganisms SEC:2 (Practical based) Microbes in Human welfare	AEC: 2, VEC: 2, IKS: 2	CC:2	22	UG Certificate 44	
	R:_____B										
	II	6 <u>Course I</u> Eukaryotes: Cell structure and Microbial Diversity <u>Course II</u> Prokaryotes: Ultrastructure	-	2 Introduction to Microbiology W	2+2 Microbes in food	VSC:2, (Practical based) Techniques in Food and Water Analysis	AEC: 2, VEC: 2	CC:2	22		

		of Cell and Diversity of Microorganisms		orld		SEC:2 (Practical based)				
		<u>Course III</u> Practical in Microbiology II Practical study of groups of organisms: Eukaryotes and Prokaryotes				Human - Microbe interactions				
	Cum Cr.	12	-	2	8	4+4	4+4+2	4	44	

Exit option: Award of UG Certificate in Major with 40-44 credits and an additional 4 credits core NSQF course/ Internship OR Continue with Major and Minor

Under Graduate Diploma in Microbiology

Credit Structure (Sem. III & IV)

	R:_____C									
Level	Semester	Major		Minor	OE	VSC, SEC (VSEC)	AEC, VEC, IKS	OJT , FP, CEP, CC, RP	Cum . Cr. / Sem.	Degree/ Cum. Cr.
		Mandatory	Electives							
5.0	III	8 <u>Course I</u> Chemical foundations for Basis of life <u>Course II</u> Fermentation technology, Biosafety and Biohazards <u>Course III</u> Basics of Medical Microbiology and Epidemiology <u>Course IV</u> Practical in Microbiology III	--	4	2	VSC:2 (Practical based) Basic Bioanalytical techniques	AEC:2	FP: 2 CC:2	22	UG Diploma 88
	R:_____D									

IV	8 <u>Course I</u> Introduction to Microbial metabolism <u>Course II</u> Introduction to Immunology <u>Course III</u> Introduction to Microbial Genetics <u>Course IV</u> Practical in Microbiology IV		4	2	SEC:2 (Practical based) Environmental microbiology	AEC:2	CEP: 2 CC:2	22	
Cum Cr.	28		10	12	6+6	8+4+2	8+4	88	

Exit option; Award of UG Diploma in Major and Minor with 80-88 credits and an additional 4 credits core NSQF course/ Internship OR Continue with Major and Minor

B.Sc. (Microbiology)**Credit Structure (Sem. V & VI)**

	R: _____ E									
Level	Semester	Major		Minor	OE	VSC, SEC (VSEC)	AEC, VEC, IKS	OJT, FP, CEP, CC, RP	Cum. Cr. / Sem.	Degree/ Cum. Cr.
		Mandatory	Electives							
5.5	V	10	4	4		VSC: 2 (Practical based)		FP/CEP: 2	22	UG Degree 132
		<u>Course I</u> Mendelian genetics and Mutations <u>Course II</u> Medical Microbiology <u>Course III</u> Biochemistry: Carbohydrate, Lipid and Protein catabolism <u>Course IV</u> Practical in Microbiology V <u>Course V</u> Practical in Microbiology VI	1. Biostatistics and Bioinformatics 2. Recombinant DNA technology			Medical lab technology : Basic techniques				
	R: _____ F									

	VI	<p>10 <u>Course I</u> Introductio n to Virology</p> <p><u>Course II</u> Advances in Immunolo gy</p> <p><u>Course III</u> Biochemistr y: Biosynthesi s of Carbohydrat es, lipids and amino acids and Inorganic metabolism</p> <p><u>Course IV</u> Practical in Microbiolo gy VII</p> <p><u>Course V</u> Practical in Microbiolo gy VIII</p>	4	4				OJT :4	22	
	Cum Cr.	48	8	18	12	8+6	8+4+2	8+6+4	132	

Exit option: Award of UG Degree in Major with 132 credits OR Continue with Major and Minor

[Abbreviation - OE – Open Electives, VSC – Vocation Skill Course, SEC – Skill Enhancement Course, (VSEC), AEC – Ability Enhancement Course, VEC – Value Education Course, IKS – Indian Knowledge System, OJT – on Job Training, FP – Field Project, CEP – Continuing Education Program, CC – Co-Curricular, RP – Research Project]

Sem. - I

Syllabus
B.Sc. (Microbiology)
(Sem.- I)

Sr.No.	Heading	Particulars
1	Description the course : Including but Not limited to:	<p>The omnipresence of microorganisms makes the study of microbiology very important for society as a whole. The study involves all the areas like food, dairy and beverage, medical and diagnostics, agricultural, environmental, computational biology and space biology.</p> <p>The interdisciplinary nature of the subject is relevant to all fields including Chemistry, Biochemistry, Biophysics, Bioinformatics, Biostatistics, Nanotechnology and Pharmaceutical sectors .</p> <p>As a microbiologist, the learner of this program can find opportunities in QC-QA, production, R and D of pharma, diagnostics, Clinical research and drug designing , food production and processing, and environmental labs .</p> <p>To summarize, the subject contributes to community welfare with respect to prevention, control and treatment of diseases, development of sustainable agricultural practices, and monitoring of the environment with green technology.</p>
2	Vertical :	Major
3	Type :	Theory / Practical
4	Credits :	2 credits (1 credit = 15 Hours for Theory or 30 Hours of Practical work in a semester)
5	Hours Allotted :	30 Hours / 60 Hours
6	Marks Allotted:	50 Marks
7	<p>CO1. To understand history, developments and scope of Microbiology</p> <p>CO2. To study importance of microorganisms in human life and in an environment</p> <p>CO3. To gain knowledge about mechanism of basic and advanced microscopy</p> <p>CO4.To apply basic principles and techniques of staining for observing microorganisms and their structures</p> <p>CO5. To demonstrate the knowledge of physical and chemical methods for control of microorganisms.</p> <p>CO6 To give an overview of a cell (prokaryote and eukaryote) with details of the structures and functions of cell organelles.</p> <p>CO7 To discuss the characteristics, types, morphology and significance of various groups of eukaryotic and prokaryotic microbes.</p> <p>CO8. To acquire skills for basic microbiological techniques.</p>	

8	<p>On completion of this course learner will be able to:</p> <p>OC1. Comprehend science of microorganisms and their significance with appreciation of scientific contributions and scope.</p> <p>OC2. Analyze a relationship between human, environment and microorganisms.</p> <p>OC3. Compare different types of control methods for their suitable application</p> <p>OC4. Differentiate various types of microorganisms on the basis of microscopic and cultural characteristics.</p> <p>OC5. Appraise the significance of diverse microbial groups.</p> <p>OC6. Develop application-based study of microorganisms.</p>
9	Modules:-

Semester	Paper	Module	Description	Credits
I	Course I Fundamentals of Microbiology	1.	Introduction to Microbiology	02
		2.	History of Microbiology	
	Course II Basic techniques in Microbiology	1.	Microscopy and Staining	02
		2.	Control of microorganisms	
	Major Course III Practical	Practical	Techniques: Staining and Control of microorganisms	02

Semester	Paper	Module	Description	Credits
II	Course I Eukaryotes: Cell structure and Microbial Diversity	1.	Eukaryotes: Cell structure	02
		2.	Eukaryotes: Microbial Diversity	
	Course II Prokaryotes: Ultra structure of cell and Diversity of Microorganisms	1.	Bacterial cell structure	02
		2.	Diversity of Prokaryotic Microorganisms	
	Major Course III Practical	Practical	Practical study of Groups of organisms : Eukaryotes and Prokaryotes	02

Course code	SEMESTER I	Credits
	Major Course I Fundamentals of Microbiology	2 Credits (30 L/hr)
Module 1	Introduction to Microbiology	15 L
1.1	The Science of Microbiology	2L
1.2	Microbial Cells	2L
1.3	Microorganisms and Their Environments	2L
1.4	Evolution and the Extent of Microbial Life	3L
1.5	The Impact of Microorganisms on Humans	3L
1.6	Scope, Relevance and Future of Microbiology	3L
Module 2	History of Microbiology	15L
2.1	The Historical Roots of Microbiology: Hooke, van Leeuwenhoek, and Cohn	2L
2.2	Pasteur and the Defeat of Spontaneous Generation	2L
2.3	Koch, Infectious Disease, and Pure Culture Microbiology	2L
2.4	Contributions of other scientists to the field of Microbiology	4L
2.5	The Rise of Microbial Diversity	3L
2.6	The Modern Era of Microbiology	2L
Reference books		
1.	Prescott, Hurley Klein-Microbiology, 7 th edition, International edition, McGraw Hill	
2.	Michael T. Madigan & J. M. Martinnko, D. Stahl, D. Clark Brock Biology of Microorganisms 13 th ed. International Edition 2012, Pearson Prentice Hall	

Course code		SEMESTER I	Credits
		Major Course II Basic techniques in Microbiology	2 Credits (30 L/hr)
Module 1		Microscopy and Staining	15L
	1.1	History of microscopy, Optical spectrum, Lenses and mirrors	3L
	1.2	Study of Bright field Microscopy (Compound light microscope) 1.2.1 Principles of Microscopy 1.2.2 Parts of a microscope	3L
	1.3	Dark Field Microscope	2L
	1.4	Phase Contrast Microscope	2L
	1.5	Introduction to dyes and stains: 1.5.1 Types, 1.5.2 Physicochemical basis of staining 1.5.3 Fixatives, Mordants, Decolorizer	5L
Module 2		Control of microorganisms	15L
	2.1	Definition of frequently used terms & Rate of microbial death, Factors affecting the effectiveness of antimicrobial agents & Properties of an ideal disinfectants	3L
	2.2	Physical methods of microbial control using heat Instruments: Mechanisms and their operations 2.2.1 Autoclave 2.2.2 Hot air oven 2.2.3 Inspissator 2.2.4 Fractional sterilization	3L
	2.3	Physical methods of microbial control using Electromagnetic radiations :Mechanisms and their operations 2.3.1 Gamma rays 2.3.2 X rays	1L
	2.4	Physical methods of microbial control using Filtration : Mechanisms and their operations 2.4.1 Membrane filters 2.4.2 HEPA filters	1L
	2.5	Chemical methods of microbial control 2.5.1 Halogens 2.5.2 Quaternary ammonium compounds	7L

		2.5.3 Aldehydes 2.5.4 Peroxygens 2.5.5 Sterilizing gasses 2.5.6 Surfaces active agents/Detergents	
Reference books			
1.	Prescott Harley Klein-Microbiology, 7th edition, International edition, McGraw Hill		
2.	Michael T. Madigan & J. M. Martinnko, D. Stahl, D. Clark Brock Biology of Microorganisms 13 th ed.International Edition 2012, Pearson Prentice Hall		
3.	Michael J.Pelczar Jr., E.C.S. Chan, Noel R. Krieg Microbiology TMH 5th Edition		

Course code	SEMESTER I	
	Major Course III (Practical in Microbiology) Practical Techniques: Staining and Control of microorganisms	2 Credits (60 L/hr)
1.	Basic steps of staining a. Preparation of suspension b. Preparation of a smear c. Staining	
2.	Simple staining techniques a. Positive (Monochrome) staining b. Negative staining	
3.	Differential staining techniques: Gram Staining	
4.	Efficiency of sterilization using autoclave (Chemical/Biological indicators)	
5.	Effect of desiccation	
6.	Effect of Ultraviolet radiation	
7.	Effect of Alcohols	
8.	Effect of Heavy metals	
9.	Effect of antibiotics	
10.	Effect of dyes	

VOCATIONAL SKILL COURSE (VSC)

SEM I

Sr.No.	Heading	Particulars
1	Description of the course : Including but Not limited to:	<p>A learner of Microbiology must have additional skill sets with respect to designing of media, inoculation techniques and knowledge of analytical methods. These are required in food and water testing laboratories where quality of both have to be maintained for the betterment of humankind. The Microbiology learner with their skills can complement chemical testing of food and water.</p> <p>On gaining these skills the learner will be able to acquire a job as a microbiologist in laboratories dealing with isolation and cultivation of microorganisms from pathological samples, natural samples such as soil ,water etc. Additionally they can have job opportunities in government and private laboratories. Besides, the learning of these courses can help them to carry out experiments related to R and D in these areas. Small and large scale industries such as Media manufacturing industries, QC-QA labs, Pharmaceuticals, Food manufacturing and processing, Environmental testing laboratories, culture collection centers can offer jobs to these learners.</p> <p>Microbiologists will be support to public health authorities in management of public health</p>
2	Vertical :	Vocational Skill course
3	Type :	Practical
4	Credits :	2 credits (1 credit = 30 Hours of Practical work in a semester)
5	Hours Allotted :	60 Hours
6	Marks Allotted:	50 Marks
7		<p>CO1. To understand basic principles of nutrition and cultivation of microorganisms</p> <p>CO2. To demonstrate various inoculation techniques for characterization and preservation of microorganisms.</p> <p>CO3. To explain the role played by microbes in food spoilage with emphasis on food hygiene and sanitation</p> <p>CO4. To explain significance of food and water microbiology for public health awareness</p>
8		<p>On completion of this course learner will be able to:</p> <p>OC1. Identify different microorganisms on the basis of their growth characteristics.</p> <p>OC2. Utilize preservation methods for storage of microorganisms</p> <p>OC3. Apply principles of food preservation for maintenance of food quality.</p> <p>OC4. Evaluate different types of microbial food spoilage.</p> <p>OC5. Prepare a range of culture media for cultivation of different microorganisms</p> <p>OC6. Design an experiment for microbiological analysis of water and food</p>
9	Modules:-	

Semes ter	Course	Description	Credits
I	Vocational skill course VSC (Practical Based)	Nutrition , Cultivation and Preservation of microorganisms	02

Course Code	SEMESTER I	Credits
	Vocational Skill Course (VSC) Practical based	2 credits (60 L/hr)
	Techniques in Nutrition, Cultivation and Preservation of Microorganisms	
1.	Basics of macro, micro and trace elements along with laboratory ingredients satisfying these needs to be covered Explain Components of culture media - peptone, meat extract, yeast extract, salts, agar, growth factors, agar, etc Preparation of Culture Media: a. Liquid media (Nutrient broth, Sabouraud's broth) b. Solid Media (Nutrient agar, Sabouraud's agar)	
2.	Preparation of slant, butts and plates	
3.	Inoculation techniques and Study of Growth: Inoculation of Liquid Medium Inoculation of Solid Media (Slants, Butts and Plates)	
4.	Nutritional types of microorganisms Principle and application of types of media i. General purpose media (Nutrient agar- <i>Escherichia coli</i> , <i>Bacillus subtilis</i> , one pigment producer) ii. Differential and (MacConkey's agar, Salt mannitol agar,) iii. Selective (Cetrimide agar) iv. Enrichment media (Ashby's mannitol agar, Mc Beth's medium) v. Enriched (Superimposed blood agar, Milk agar) vi. Synthetic and complex media (M9, Chu no 10) vii. Anaerobic media (Fluid Thioglycollate medium, Differential Reinforced Clostridial medium)	
5.	Study of Colony Characteristics of Bacteria	
6.	Concepts and techniques of Preservation of cultures i. Periodic transfer ii. Soil stock	

	iii. Glycerol stock iv. Paraffin oil overlaying iv. Lyophilization, storage in liquid nitrogen (Virtual labs) v. Culture collections (tabulation)
References	
1.	Prescott, Hurley, Klein Microbiology, 10 th edition, International edition, McGraw Hill.
2.	Tortora, Funke & Case Microbiology, an Introduction 9 th and 11 th edition, Pearson education
3.	Michael J. Pelczar Jr., E.C.S. Chan, Noel R. Krieg Microbiology TMH 5 th Edition
4.	Varghese N., Joy P. P. Microbiology Laboratory Manual, (2014) 1 st ed, Aromatic and Medicinal Plants Research Station, Ernakulam, Kerala, India

SKILL ENHANCEMENT COURSE (SEC)
SEM I

Sr.No.	Heading	Particulars
1	Description of the course : Including but Not limited to:	<p>A learner of Microbiology must have additional skill sets to understand the importance of microorganisms and their products in human welfare .</p> <p>The course will familiarize the students with the beneficial role of microbes to enhance soil fertility, improve human health with an introduction to probiotics and the applications of enzymes in day to day life and fermented foods.</p> <p>The course will further emphasize an understanding of positive and negative interactions of microorganisms with humans, in terms of studying normal flora as well as disease causing organisms . The role of fomites and aerosols in infections and their control will be studied. An understanding of virulence factors and related diseases is introduced. The course will include practical application of various media commonly used in clinical laboratories.</p>
2	Vertical :	Skill Enhancement course
3	Type :	Practical
4	Credits :	2 credits (1 credit = 30 Hours of Practical work in a semester)
5	Hours Allotted :	60 Hours
6	Marks Allotted:	50 Marks
7	<p>CO1.To familiarize learners with antibiotic producers and the method of isolating them from soil.</p> <p>CO2 .To explain the concept of improvement of soil fertility by microbes.</p> <p>CO3.To enable learners to understand the use of microbes in fermented foods ,probiotic foods and enzymes in human welfare</p> <p>CO4 To differentiate between beneficial and harmful microorganisms associated with humans</p> <p>CO5. To emphasize the role of fomites and aerosols in the spread of infections.</p> <p>CO6. To evaluate pathogens based on growth characteristics and virulence factors</p>	
8	<p>On completion of this course learner will be able to:</p> <p>OC1. Enlist the microbes from various sources which are useful and harmful to mankind in different ways</p> <p>OC2. Understand the benefits of microbes from soil, fermented foods, commercial probiotic products and enzymes obtained from them.</p> <p>OC3. Perform experiments to isolate and detect beneficial and pathogenic microbes from various samples.</p> <p>OC4. Analyze the benefits of soil microbes as biofertilizers. antibiotic producers , enzyme producers as well as food microbes beneficial for human health.</p> <p>OC5. Design experiments to study growth patterns and detect virulence factors of selected pathogens.</p>	
9	Modules:-	

Skill Enhancement course (SEC)

Semester	Course	Description	Credits
I	Skill Enhancement course SEC (Practical Based)	Microbes in Human Welfare	02

Course Code	SEMESTER I	Credits
	Skill Enhancement Course (SEC) Practical based	2 credits (60 L/hr)
	Microbes in Human Welfare	
1.	Overview of Soil microbes and their products in human welfare a.Screening for Antibiotic producers by crowded plate technique b.Confirmation of Antibiotic producers by Wilkins overlay technique c.Isolation of <i>Rhizobium</i> d.Isolation of Phosphate solubilizers e.Enrichment and Isolation of <i>Azotobacter</i> f.Isolation of Potassium solubilizers	
2.	Overview of Study of lactics from traditional and modern foods a,Isolation of Lactic acid bacteria b.Characterisation of lactic acid bacteria. c.Study of Indian fermented foods - Idli batter/Pickles . d.Isolation of probiotic bacteria from different commercial products e.Preparation of curd and its study.	
3.	Overview of Microbial enzymes and their applications a.Isolation and detection of lipase producers b.Isolation and detection of Protease producers c.Isolation and detection of Amylases producers d. Application of the enzymes in textile/ detergents/ tanning	
4.	Overview of Beverages and Fermented Foods a.Leavening of Bread dough b.Production of Alcohol from jaggery c.Production of wine	
References		
1.	Soil Microbiology by Subbarao N.S. , 3rd Ed.	
2.	A Handbook of Elementary Microbiology, 2014 by H.A. Modi.	
3.	Michael J. Pelczar Jr., E.C.S. Chan, Noel R. Krieg Microbiology TMH 5 th Edition	
4.	Practical Microbiology by Maheshwari D.K. (Author), 2010	

Guidelines for examination and evaluation (External and Internal)

Evaluation Pattern for Major Courses

MAJOR:6 credits

Theory/Practical	Credits	No. of Hours	Marks
Theory: Paper 1	2	30	50
Theory: Paper 2	2	30	50
Practical	2	60	50

Theory courses

Internal Continuous Assessment: 40% (20 Marks)	Semester End Examination: 60% (30 Marks)	Duration for End semester examination
Continuous Evaluation through: Quizzes, Class Tests, presentation, project, role play, creative writing, assignment etc.	As per paper pattern*	1hour

*Paper Pattern for 30 marks :

30 Marks per paper Semester End Theory Examination:

Duration - These examinations shall be of one hour duration

Question	Option	Marks	Questions Based on
Q1.	Attempt any two out of three questions (5 marks each)	10	Module 1
Q2.	Attempt any two out of three questions (5 marks each)	10	Module 2
Q3.	Attempt any two out of three questions (5 marks each) OR Attempt any five out of eight questions (2 marks each)	10	Module 1,2
	Total	30	

Practical courses

Internal Continuous Assessment: 40% (20 Marks)	Semester End Examination: 60% (30 Marks)	Duration for End semester examination
Minor experiment /Viva/ Assignment/ objective question test (15 Marks), Overall performance (5 Marks) = 20 Marks	Experiments (15 marks Major + 5 marks Viva/Spots + 5 marks Quiz and 5 Marks for Journal = 30 Marks)	2 hours each day (2days)

Evaluation Pattern for Vocational Skill Course

Practical course of 2 credits, Duration: 60 h, Total marks: 50

Internal Continuous Assessment: 40% (20 Marks)	Semester End Examination: 60% (30 Marks)
Minor experiment /Viva/ Assignment/ objective question test (15 Marks), Overall performance (5 Marks) = 20 Marks	Experiments (15 marks + 10 marks and 5 Marks for Journal = 30 Marks)

Evaluation Pattern for Skill Enhancement Course

Practical course of 2 credits, Duration: 60 h, Total marks: 50

Internal Continuous Assessment: 40% (20 Marks)	Semester End Examination: 60% (30 Marks)
Minor experiment /Viva/ Assignment/ objective question test (15 Marks), Overall performance (5 Marks) = 20 Marks	Experiments (15 marks + 10 marks and 5 Marks for Journal = 30 Marks)

Letter Grades and Grade Points:

Semester GPA/ Programme CGPA Semester/ Programme	% of Marks	Alpha-Sign/ Letter Grade Result	Grading Point
9.00 - 10.00	90.0 - 100	O (Outstanding)	10
8.00 - < 9.00	80.0 - < 90.0	A+ (Excellent)	9
7.00 - < 8.00	70.0 - < 80.0	A (Very Good)	8
6.00 - < 7.00	60.0 - < 70.0	B+ (Good)	7
5.50 - < 6.00	55.0 - < 60.0	B (Above Average)	6
5.00 - < 5.50	50.0 - < 55.0	C (Average)	5
4.00 - < 5.00	40.0 - < 50.0	P (Pass)	4
Below 4.00	Below 40.0	F (Fail)	0
Ab (Absent)	-	Ab (Absent)	0

This syllabus is applicable to IDOL students as well, w.e.f. 2025-26

Signatures of Team Members

Name	College Name	Sign
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Appendix B

Justification for B.Sc. (Microbiology)

1.	Necessity for starting the course:	The necessity for starting the Certificate, Diploma and Undergraduate degree program in B.Sc. (Microbiology) lies in its significance as a fundamental , interdisciplinary, skill and research based , science. Due to its multidisciplinary scope in research related to medical, industrial, environmental, etc. the course prepares the learners for higher education, job opportunities and active participation in addressing national and global challenges
2.	Whether the UGC has recommended the course:	Yes
3.	Whether all the courses have commenced from the academic year 2023-24	The course has commenced in the university , but restructured under NEP 2020 in the academic year 2024-25 .
4.	The courses started by the University are self-financed, whether adequate number of eligible permanent faculties are available?:	This course is aided / self-financed based on the sanction given by University of Mumbai to affiliated colleges from time to time.
5.	To give details regarding the duration of the Course and is it possible to compress the course?:	The duration of the program is three years (6 semesters). It is not possible to compress the course.
6.	The intake capacity of each course and no. of admissions given in the current academic year:	The intake capacity is variable from college to college based on sanctions received from the University.
7.	Opportunities of Employability / Employment available after undertaking these courses:	B.Sc. (Microbiology) graduates can apply their professional skills in various sectors: Diagnostics, Pharmaceuticals, Food, Environment management, Agriculture, Astrobiology, etc. making them key players in the lives of humans and society at large. They have diversified opportunities of jobs in both government and private sectors in India as well as globally. They can contribute immensely to nation building.

Sign of the Offg. Dean
Prof. Shivram S. Garje
Faculty of Science &
Technology

Sign of the
Offg. Associate Dean
Dr. Madhav R. Rajwade
Faculty of Science &
Technology

Sign of the Offg. Dean
Prof. Shivram S. Garje
Faculty of Science &
Technology

As Per NEP 2020

University of Mumbai



Syllabus for Basket of OE	
Board of Studies in Mass Media	
UG First Year Programme	
Semester I	
Title of Paper	Credits 2
Content Writing	2
From the Academic Year	2024-2025

CONTENT WRITING

Sr. No.	Heading	Particulars
1	Description the course : Including but Not limited to :	A content writing course is designed to equip students with the understanding and the skills required to create compelling, effective, and engaging written content for various platforms and purposes.
2	Vertical :	Open Elective
3	Type :	Theory
4	Credit:	2 credits
5	Hours Allotted :	30 Hours
6	Marks Allotted:	50 Marks
7	Course Objectives: (List some of the course objectives) <ol style="list-style-type: none"> 1. To understand the role of content writing in marketing and communication strategies. 2. To review essential grammar rules, punctuation, and writing style guidelines. 3. To understand basic principles of content writing apt for different platforms and different target audiences 	
8	Course Outcomes: (List some of the course outcomes) <ol style="list-style-type: none"> 1. To provide students with tools that would help them communicate effectively. 2. Understanding crisp writing as part of Mass Communication 3. The ability to draw the essence of situations and develop clarity of thought. 	

9	Modules:- Per credit One module can be created
	Module 1: FOUNDATION
	<ol style="list-style-type: none"> 1. Grammar Refresher: With special emphasis on use of punctuations, prepositions, capital letters and lower case 2. Vocabulary building: Meaning, usage of words , acronyms 3. Common errors: Homophones and common errors in English usage. 4. Editing Skills: Identifying redundant words and phrases and eliminating these. 5. Essentials of good writing: With emphasis on writing with clarity, logic and structure, Structuring a story, Creating a flow,
	Module 2: WRITING TIPS AND TECHNIQUES
	<ol style="list-style-type: none"> 1. Writing tickers/ scrolls: For television news 2. Writing social media post: Twitter and for other social networks 3. Writing briefs/snippets: News briefs, Lifestyle and entertainment snippets 4. Caption writing: Picture stories etc 5. Writing headlines: News headlines and feature headlines
	Module 3: PRESENTATION TOOLS AND TECHNIQUES
	<ol style="list-style-type: none"> 1. Power Point Presentation: Use of Power Point tools, Power Point to Pdf Power Point to self-animated presentation, Auto timing of Power Point presentation 2. Info graphic: Colour selection, Use of clip art, Use of Power Point smart tools, Minimalist animation for maximum impact 3. Three minute presentation: Content for single slide, Uses of phrases, Effective word selection, Effective presentation 4. Google Advance search: How to select relevant information, Locating authentic information, How to gather information for domestic and international websites 5. Plagiarism: How to do a plagiarism check, Paraphrasing, Citation and referencing style
	Module 4: WRITING FOR THE WEB
	<ol style="list-style-type: none"> 1. Content is King: Importance of content 2. Less is More: Writing for print media/ social media like Twitter, etc 3. Copywriting: Ad campaigns (creative, witty and attractive) 4. Realtime Content: Difference in writing for print vs digital 5. Keywords: Designing keywords for Search Engine Optimization

10	Text Books: 1. The Editor’s Toolbox by Buck Ryan and Michael O’ Donnell, Surjeet Publication 2. Writing for the Mass Media by James Glen Stovall 3. A Handbook of Rhetorical Devices by Robert A Harris																
11	Reference Books: 1. The Editor’s Toolbox by Buck Ryan and Michael O’ Donnell, Surjeet Publication 2. Writing for the Mass Media by James Glen Stovall 3. A Handbook of Rhetorical Devices by Robert A Harris																
12	Internal Continuous Assessment: 40%	External, Semester End Examination 60% Individual Passing in Internal and External Examination															
13	Continuous Evaluation through: Quizzes, Class Tests, presentation, project, role play, creative writing, assignment etc.(at least 3)	 1. Writing Captions and Headlines: Simple writing is difficult. This assignment will help the learners to grasp the most essential aspect of a story and present these as headlines and captions. 2. A three- minutes power point presentation: This assignment challenges the learners to draw the essence of elaborate reports, research papers and present in three minutes. 3. Word Game/ Quiz: This is an exciting way to get learners engaged in vocabulary building.															
14	Format of Question Paper: for the final examination Question.1 is compulsory. Attempt any 1 from Q2. And Q3. Each question carries 15 Marks <table><tr><th>Question No</th><th>Questions</th><th>Marks</th></tr><tr><td>Q 1</td><td>Practical/ Case study</td><td>15</td></tr><tr><td>Q 2</td><td>Practical/ Theory</td><td>15</td></tr><tr><td>Q 3</td><td>Practical/ Theory</td><td>15</td></tr><tr><td></td><td>TOTAL</td><td>30</td></tr></table>		Question No	Questions	Marks	Q 1	Practical/ Case study	15	Q 2	Practical/ Theory	15	Q 3	Practical/ Theory	15		TOTAL	30
Question No	Questions	Marks															
Q 1	Practical/ Case study	15															
Q 2	Practical/ Theory	15															
Q 3	Practical/ Theory	15															
	TOTAL	30															

	<p>Note:</p> <ol style="list-style-type: none"> 1. Equal Weightage is to be given to all the modules. 2. Internal option shall be given in Q1. 3. 15 marks question may subdivide into 7.5 marks each. Internal option shall be given, i.e attempt any two out of three. For direct 15 Marks question option should be given. Attempt any one out of two. 4. Use of simple calculator is allowed in the examination. 5. Wherever possible more importance is to be given to the practical problems.
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Sign of the BOS Chairman
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BoS in Mass Media

Sign of the
Offg. Associate Dean
Prof. Suchitra Naik
Humanities

Sign of the Offg. Dean
Dr. Anil Singh
Humanities

As Per NEP 2020

University of Mumbai



Syllabus for Basket of Open Electives	
Ad- hoc Board of Studies in B. Com. (Management Studies)	
UG First Year Programme	
Semester	I
Title of Paper	Credits 2/ 4
Case Studies in Management	2
From the Academic Year	2024-25

Sr. No.	Heading	Particulars
1	Description the course: Including but not limited to:	Management is not only an essence in all fields but it is a prevalent tool in the hands of corporates to governments. From planning to controlling and from budgeting to reporting, all managerial elements are the most essential parts of daily life. So the learners need to know about all aspects from rural development to creating artificial intelligence. They will understand how to develop India, one of the fifth most powerful economies in the world. It is expected that the learners should learn how to develop our economy and management for the future generation from these managerial facets.
2	Vertical :	Major/Minor/ Open Elective /Skill Enhancement / Ability Enhancement/Indian Knowledge System (Choose By √)
3	Type :	Theory / Practical
4	Credit:	2 credits
5	Hours Allotted :	30 Hours
6	Marks Allotted:	50 Marks
7	Course Objectives: <ol style="list-style-type: none"> 1. Identify the usages of case studies in the management 2. Analyse case studies using relevant theoretical frameworks 3. Develop and present well-supported recommendations for business challenges through case studies 	

8	Course Outcomes: <ol style="list-style-type: none"> 1. Learners should understand the importance of case studies in management. 2. Students should develop analytical skills to dissect complex business problems. 3. Learners should apply theoretical frameworks to real-world case studies.
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9	Modules: -
	Module 1: Importance of Case Studies in Management
	<ol style="list-style-type: none"> a) Meaning of Case Study, Features of Case study, Need of Case study, Advantages of case studies in management b) Approach of Theoretical case studies and Practical case studies, difference between theory and practical case studies, Usages of case studies in the industry
	Module 2: Types and Examples of Case Studies
	<ol style="list-style-type: none"> a) Types: By Purpose, By Focus, By the role of the researcher, By types of the Industry, By Role models b) Examples of the case studies: Indian business houses, famous overseas businesses, famous personalities.
10	Text Books: <ul style="list-style-type: none"> ● Ramaswamy. V S & Namakumari. S, <i>MARKETING MANAGEMENT-PLANNING IMPLEMENTATION AND CONTROL</i>, Macmillan Business Books, New Delhi, 2002, ● Hall Of India, New Delhi, ● Sanjay Mohapatra: 2011: Case Studies in Strategic Management: A Practical Approach: Pearson Education Publication India

11	Reference Books: <ul style="list-style-type: none"> ● Case Studies in Strategic Management by Sanjay Mohapatra ● Business Cases and How to Crack Them by Mimi Hoang ● The Case Study Handbook by Robert Yin ● Case in Point: Complete Guide to Case Study Analysis by Judith Rae Weston ● Harvard Business School Cases.
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12	Internal Continuous Assessment: 40%	External, Semester End Examination Individual Passing in Internal and External Examination : 60%
13	Continuous Evaluation through: Quizzes, Class Tests, presentation, project, role play, creative writing, assignment etc.(at least 3)	
14	Format of Question Paper: for the final examination External Paper Pattern (30 Marks) Q1. Case Study Analysis 10 Marks Q2. Answer the following (Any One) 10 marks A Or B Q3. Answer the following (Any One) 10 Marks A Or B	

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Chairman
Prof. Dr. Kanchan
Fulmali
BOS in BMS

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Sangurde
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Sign of the
Offg. Associate Dean
Prin. Kishori Bhagat
Faculty of
Management

Sign of the
Offg. Dean
Prof. Kavita Laghate
Faculty of Commerce
& Management

As Per NEP 2020

University of Mumbai



Syllabus for Basket of AEC	
Board of Studies in English	
UG First Year Programme B.Sc	
Semester	I
Title of Paper	Credits
Introduction to Communication Skills in English I	2
From the Academic Year	2024-2025

Sr. No.	Heading	Particulars
1	Description of the course: Including but Not limited to:	<p>Introduction to Communication Skills in English I</p> <p>Effective academic communication skills are essential for success in scholarly pursuits. In the academic realm, proficiency extends beyond verbal articulation to encompass precise and coherent written expression. Students are not only required to engage in thoughtful discussions and articulate complex ideas verbally but must also demonstrate their understanding through well-crafted written assignments, and presentations. Academic communication involves the mastery of scholarly conventions, such as adherence to academic writing styles, and the ability to engage in dialogue with peers and scholars. It encompasses the skillful navigation of academic discourse, fostering an environment where ideas are shared, challenged, and refined. Developing strong academic communication skills empower individuals to contribute meaningfully to intellectual conversations, enriching both their academic journey and the broader scholarly community.</p> <p>This course with its 30:20 pattern will also help in accomplishing this goal. The course is aimed at honing their cognitive, analytical, linguistic and creative skills. It is hoped that by the end of the academic year, the learners will have developed confidence in using the English language both for oral and written communication as well as develop interest in enhancing these skills later on.</p>
2	Vertical:	AEC (Ability Enhancement Course)
3	Type:	Theory
4	Credit:	2 credits (1credit=15 Hours for Theory in a semester)
5	Hours Allotted:	30Hours
6	Marks Allotted:	50Marks
7	Course Objectives:	<ol style="list-style-type: none"> 1. To cultivate a comprehensive understanding of communication skills 2. To enhance reading proficiency with a diverse range of written texts with different genres and styles of written communication. 3. To develop proficiency in grammatical accuracy with specific focus on common grammatical errors and provide targeted exercises for improvement. 4. To equip learners with proficient presentation and conversation skills by integrating practical exercises for public speaking and interpersonal communication. 5. To provide practical experience in formal writing, including Statement of Purpose (SoP) preparation.

- | | |
|---|---|
| 8 | <p>Course Outcomes:
At the end of the course, learners will:</p> <ul style="list-style-type: none"> • Demonstrate an understanding of essential aspects of communication skills • Exhibit the ability to Read a variety of written text using subskills such as skimming and scanning. • Identify and rectify common grammatical errors in English. • Show competence in delivering compelling presentations and engage in articulate and effective conversations in English across different contexts. • Display advanced formal writing skills in crafting job application letters, CVs, and Statements of Purpose. |
|---|---|

- | | |
|---|--|
| 9 | <p>Modules: -</p> |
| | <p>Module1: (15 Lectures)</p> |
| | <p>A) Introduction to Communication Skills</p> <ul style="list-style-type: none"> • The Seven Cs of Effective Communication • Verbal and Non-Verbal Communication • Cross-cultural communication • Technology-enabled Business Communication • Features of Effective Written Communication • Characteristics of an Effective Speech • Effective Listening Skills <p>B) Reading Skills:</p> <ul style="list-style-type: none"> • Scanning a text for information • Skimming a passage to look for main ideas, understanding text type • Guessing meaning of an expression (word/phrase/clause) • Building inference skills <p>Passages from academic, professional, and literary domains around 200- 250 words, could be chosen in this section.</p> <p>C) Grammar</p> <ul style="list-style-type: none"> • Subject Verb Agreement • Tenses • Question Tag • Change the Voice • Framing Interrogative sentence • Synonyms and Antonyms • Misplaced modifiers <p>Grammar should be taught with a remedial approach so as to enable learners to avoid common errors in their written and spoken communication.</p> |

Module 2: (15 Lectures)

A) Speaking Skills in English

Conversation skills

- Opening a conversation
- Introducing oneself in various contexts
- Introducing others formally and informally

Presentation Skills

- Introduction: Essentials of Presentation skills
- Analysis of model Presentations
- Planning and Delivering the Presentation
- Developing & Displaying Visual Aids
- Handling Questions from the Audience

B) Formal Writing Skills:

- Interpreting and describing different types of visual information
- Job applications with bio data (solicited and unsolicited)
- Statement of Purpose

10 Text Books: N.A.

11 References:

- Bellare, Nirmala. *Reading & Study Strategies*. Books. 1 and 2. Oxford University Press, 1997, 1998
- Bellare, Nirmala. *Easy Steps to Summary Writing and Note-Making*. Amazon Kindle Edition, 2020
- Comfort, Jeremy, et al. *Speaking Effectively: Developing Speaking Skills for Business English*. Cambridge University Press, 1994.
- Das, Bikram K., et. al. *An Introduction to Professional English and Soft Skills*. Cambridge University Press India Pvt. Ltd., 2010
- Das, Yadjnaseni & R. Saha (eds.) *English for Careers*. Pearson Education India, 2012.
- Dimond-Bayir, Stephanie. *Unlock Level 2 Listening and Speaking Skills Student's Book and Online Workbook: Listening and Speaking Skills Student's Book+ Online Workbook*. Cambridge University Press, 2014.
- Doff, Adrian and Christopher Jones. *Language in Use* (Intermediate and Upper Intermediate). CUP, 2004.
- Glendinning, Eric H. and Beverley Holmstrom. Second edition. *Study Reading: A Course in Reading Skills for Academic Purposes*. CUP, 2004
- Goodale, Malcolm. *Professional Presentations Video Pack: A Video Based Course*. Cambridge University Press, 1998.
- Grellet, F. *Developing Reading Skills*. Cambridge: Cambridge University Press, 1981
- Grussendorf, Marion. *English for Presentations*. Oxford University Press, 2007.

- Hamp- Lyons, Liz and Ben Heasiey. Second edition. *Study Writing: A Course in Writing Skills for Academic Purposes*. CUP, 2006
- Labade, Sachin, Katre Deepa et al. *Communication Skills in English*. Orient Blackswan, Pvt Ltd, 2021.
- Lewis, N. *How to Read Better & Faster*. New Delhi, Goyal Publishers & Distributors Pvt. Ltd, 2006.
- McCarthy, Michael and Felicity O'Dell. *English Vocabulary in Use*. Cambridge: Cambridge University Press, 2001.
- Mohan, RC Sharma Krishna. *Business Correspondence and Report Writing*. Third edition. Tata McGraw-Hill Education, 2002.
- Murphy, Raymond, et al. *Grammar in use: Intermediate*. Cambridge University Press, 2000
- Raman, Meenakshi, and Singh, Prakash. *Business Communication*. India, Oxford University Press, 2006.
- Richards, Jack C., and Chuck Sandy. *Passages Level 2 Student's Book*. Cambridge University Press, 2014.
- Sadanand, Kamlesh & S. Punitha. *Spoken English: A Foundation Course*. (Part 1 & 2). Orient Blackswan. 2009.
- Sasikumar, V., et al. *A Course in Listening & Speaking I*. 2005. Cambridge University Press India Pvt. Ltd. (under the Foundation Books Imprint), 2010
- Savage, Alice, et al *Effective Academic Writing*. Oxford: OUP, 2005
- Sethi, J. *Standard English and Indian usage: Vocabulary and grammar*. PHI Learning Pvt. Ltd., 2011.
- Taylor, Grant. *English Conversation Practice*. 1967. Tata McGraw-Hill, 2013
- Turton, Nigel D. *A B C of Common Grammatical Errors*. 1995. Macmillan India Ltd., 1996
- Vas, Gratian. *English Grammar for Everyone*. Mumbai, Shree Book Centre, 2015
- Watson, T. *Reading Comprehension Skills and Strategies: Level 6*. Saddleback Educational Publishing, 2002

Web link Resources:

- A conversation about household appliances: <https://youtu.be/rAP10fSborU> 13.
- Video on psychology: Why do we dream? <https://youtu.be/2W85Dwxx218>
- Video on social media: What is a social media influencer? <https://youtu.be/39A3og7enz8>
- Tips on communication (TED Talk): The Secrets of Learning a New Language https://youtu.be/o_XVt5rdpFY
- Expressing opinions: If Cinderella Were a Guy: <https://youtu.be/p40yCNctKXg>
- Video on the English language: Where did English come from? <https://youtu.be/YEaSxhcns7Y>

12	Internal Continuous Assessment: 40%	Semester End Examination: 60%								
13	Continuous Evaluation through: <ul style="list-style-type: none">• Participation in an activity based on Presentation Skills and Conversation skills each (Module 2 A) (10 marks) The class may be divided into batches by creating formal schedule for the same before the semester End Examination.• Participation in two classroom activities involving skills other than presentation and conversation skills (05 marks)• Overall attendance (05 marks) (Percentage of learners' attendance in class to be considered) Suggested Activities: <ul style="list-style-type: none">▪ Listening to audio clips/ books to enhance listening skills▪ Reading aloud from newspapers, magazines, stories, non-fiction followed by classroom discussion on these to enhance reading and speaking skills									
14	Format of Question Paper: for the final examination <table><tr><td>Q.1. Short notes (2 out of 4) – On Module 1 (A)</td><td>10 marks</td></tr><tr><td>Q.2. A. Unseen Passage (200-250 words) (Module 1 B)</td><td>06 marks</td></tr><tr><td>B. Questions on grammar (Module 1 C)</td><td>04 marks</td></tr><tr><td>Q. 3. Writing Skills (1 out of 2) on Module 2 (B)</td><td>10 marks</td></tr></table>		Q.1. Short notes (2 out of 4) – On Module 1 (A)	10 marks	Q.2. A. Unseen Passage (200-250 words) (Module 1 B)	06 marks	B. Questions on grammar (Module 1 C)	04 marks	Q. 3. Writing Skills (1 out of 2) on Module 2 (B)	10 marks
Q.1. Short notes (2 out of 4) – On Module 1 (A)	10 marks									
Q.2. A. Unseen Passage (200-250 words) (Module 1 B)	06 marks									
B. Questions on grammar (Module 1 C)	04 marks									
Q. 3. Writing Skills (1 out of 2) on Module 2 (B)	10 marks									

Sign of BOS Chairman
Prof. Dr. Shivaji Sargar
Board of Studies in
English

Sign of the Offg.
Associate Dean
Dr. Suchitra Naik
Faculty of
Humanities

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Prof. Dr. Anil Singh
Faculty of
Humanities

As Per NEP 2020

University of Mumbai



Title of the Course

Foundation of Behavioural skills – Basic level

Semester – Sem I

Syllabus for Two Credit

(With effect from the academic year 2024-25)

PROGRAM	BA /BSc/ BCOm
SEMESTER	I
COURSE TITLE	Foundation of Behavioural skills Basic level
VERTICLE /CATEGORY	E (Value Education Course)
COURSE LEVEL	50
COURSE CODE	
COURSE CREDIT	2
HOURS PER WEEK THEORY	2
HOURS PER WEEK PRACTICAL/TUTORIAL	

COURSE OBJECTIVE
<ol style="list-style-type: none"> 1. To develop understating about behavioural Skills. 2. To develop communication skills of students through experiential learning. 3. Life skill development through work life balance and stress management training. 4. To developing effective leadership quality among the learners.
COURSE OUTCOME
CO1: Learners will be able to Define and Identify different life skills required in personal and professional life
CO2: Learners will develop an awareness of the self and apply well-defined techniques to cope with emotions and stress.
CO3: Learners will be able to explain the basic mechanics of effective communication and demonstrate these through presentations and take part in group discussions
CO4: Learners will be able to use appropriate thinking and problem-solving techniques to solve new problems

ORGANISATION OF THE COURSE

UNIT NO	COURSE UNITS	HOURS PER WEEK
1	Module 1: Behavioural skills	2*5=10
2	Module 2: Stress Management	2*2=04
3	Module 3: 21st-century skills	2*5=10
4	Module 4: Understanding Value Education	2*3=6
TOTAL HOURS		30

COURSE DESIGN

UNIT TITLE	OUTCOME	DESCRIPTION	PEDAGOGICAL APPROACH
Behavioural skills	Learners will be able to Define and Identify different life skills required in personal and professional life.	<p>Overview of Life Skills: Meaning and significance of life skills, skills identified by WHO: Self-awareness, Empathy, Critical thinking, Creative thinking, Decision making, problem solving, Effective communication, interpersonal relationship, coping with stress, coping with emotion.</p> <p>Life skills for professionals: positive thinking, right attitude, attention to detail, having the big picture, learning skills, research skills, perseverance, setting goals and achieving them, helping others, leadership, motivation, self-motivation, and motivating others, personality development, IQ, EQ, and SQ2.</p>	Examples, TED Talks, videos.

Stress Management	Learners will develop an awareness of the self and apply well-defined techniques to cope with emotions and stress.	Stress, reasons and effects, identifying stress, stress diaries, the four A's of stress management, techniques, Approaches: action-oriented, emotion-oriented, acceptance-oriented, resilience, Gratitude Training, Coping with emotions: Identifying and managing emotions, harmful ways of dealing with emotions, PATH method and relaxation techniques.	Examples, Role Plays, Behavioral Simulations and Games
21st-century skills	Learners will be able to explain the basic mechanics of effective communication and demonstrate these through presentations and take part in group discussions	Creativity, Critical Thinking, Collaboration, Problem Solving, Decision Making, Need for Creativity in the 21st century, Imagination, Intuition, Experience, Sources of Creativity, Lateral Thinking, Myths of creativity, Critical thinking Vs Creative thinking,	Case Discussions, Games and simulations, Group discussions.
Understanding Value Education	Learners will be able to use appropriate thinking and problem-solving techniques to solve new problems	Introduction – Definition, Importance, Process & Classifications of Value Education: Understanding the need, basic guidelines, content and process for Value Education Understanding the thought-provoking issues; need for Values in our daily life Choices making – Choosing, Cherishing & Acting, Classification of Value Education: understanding Personal Values, Social Values, Moral Values & Spiritual Values.	Case Discussions, Games and simulations, Community Service, Presentations

CONTINUOUS ASSESSMENT TESTS (CAT) & SEMESTER END EXAMINATION (SEE)			
NATURE OF ASSESSMENT	MARKS	METHODOLOGY	COURSE OUTCOME
CAT 1 *	10	Online Quiz, Open book test, Presentations, Projects and Viva	CO1
CAT 2 *	05	Presentations, Projects and Viva	CO1, CO2
CAT 3 *	10	Online Quiz, Open book test, Presentations, Project Assignment and Viva	CO3
CAT 4 *	05	Presentations, Projects and Viva	CO4
SEE	30	Five questions of 10 marks each (from each course unit), to be attempted any 3, 10 marks may be subdivided into two sub questions of 5 marks	CO1, CO2, CO3, CO4

*Any Two for 20 marks

ESSENTIAL READINGS	<ol style="list-style-type: none"> 1. R R Gaur, R Sangal, G P Bagaria, 2009, A Foundation Course in Human Values and Professional Ethics. 2. Shiv Khera, "You Can Win", Macmillan Books, New York, 2003. 3. Barun K. Mitra, "Personality Development & Soft Skills", Oxford Publishers, Third impression, 2017.
ADDITIONAL READINGS	The 7 Habits of Highly Effective People: Powerful Lessons in Personal Change Stephen Covey Free Press (first published August 15th 1989)

Syllabus Drafting Committee

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Prof. Dr. Tejashree Deshmukh

Mr. Nitin Vazirani

Signature

Prof. Kavita Laghate

Mr. Bhooshan Maikani
Dr. Vinita Pimple

Chairman of Board of Studies in Value Education

As Per NEP 2020

University of Mumbai



Syllabus for Indian Knowledge System	
Board of Studies in Indian Knowledge System	
UG First Year Programme	
Semester	I OR II
Title of Paper	Credits 2 for either I or II Semester
I) Indian Knowledge System	
From the Academic Year	2024-2025

Sr. No.	Heading	Particulars
1	Description the course : Including but Not limited to :	Introduction, relevance, Usefulness, Application, interest, connection with other courses, demand in the industry, job prospects etc.
2	Vertical :	Major/Minor/Open Elective /Skill Enhancement / Ability Enhancement/Indian Knowledge System (Choose By $\sqrt{\quad}$)
3	Type :	Theory / Practical
4	Credit:	2 credits (1 credit = 15 Hours for Theory or 30 Hours of Practical work in a semester)
5	Hours Allotted :	30 Hours
6	Marks Allotted:	50 Marks
7	Course Objectives: (List some of the course objectives) <ol style="list-style-type: none"> 1. To sensitize the students about context in which they are embedded i.e. Indian culture and civilisation including its Knowledge System and Tradition. 2. To help student to understand the knowledge, art and creative practices, skills and values in ancient Indian system. 3. To help to study the enriched scientific Indian heritage. 4. To introduce the contribution from Ancient Indian system & tradition to modern science & Technology. 	
8	Course Outcomes: (List some of the course outcomes) <ol style="list-style-type: none"> 1. Learner will understand and appreciate the rich Indian Knowledge Tradition 2. Lerner will understand the contribution of Indians in various fields 3. Lerner will experience increase subject-awareness and self-esteem 4. Lerner will develop a comprehensive understanding of how all knowledge is ultimately intertwined 	
9	Modules:-	
	Module 1: (10 Hours)	
	<ol style="list-style-type: none"> 1. Introduction to IKS (What is knowledge System, Characteristic Features of Indian Knowledge System) 2. Why IKS? (Macaulay's Education Policy and its impact, Need of revisiting Ancient Indian Traditions) 3. Scope of IKS (The Universality of IKS (from Micro to Macro), development form Earliest times to 18th Century CE) 4. Tradition of IKS (Ancient Indian Education System: Home, Gurukul, Pathashala, Universities and ancient educational centres) 5. Relevant sites in the vicinity of the Institute (Water Management System at Kanheri, Temple Management of Ambarnath, etc.) 	

	Module 2: (10 Hours)	
	1. Medicine (Ayurveda) 2. Alchemy 3. Mathematics 4. Logic 5. Art of Governance (Arthashastra)	
	Module 3: (10 Hours) (Select Any FIVE out of the following)	
	1. Aesthetics 2. Town Planning 3. Strategic Studies 4. Krishi Shastra 5. Vyakaran & Lexicography 6. Natyashastra 7. Ancient Sports 8. Astronomy	9. Yoga and Wellbeing 10. Linguistics 11. Chitrasutra 12. Architecture 13. Taxation 14. Banking 15. Trade and Commerce
10	Reference Books 1. Concise history of science in India- D.M. Bose, S.N Sen, B.V. Subbarayappa. 2. Positive sciences of the Ancient Hindus- Brajendranatha seal, Motilal Banrasidas, Delhi 1958. 3. History of Chemistry in Ancient India & Medieval India, P.Ray- Indian Chemicals Society, Calcutta 1956 4. Charaka Samhita- a scientific synopsis, P. Ray & H.N Gupta National Institute of Sciences of India, New Delhi 1965. 5. MacDonnell A.A- History of Sanskrit literature 6. Winternitz M- History of Indian Literature Vol. I, II & III 7. Dasgupta S.N & De S.K- History of Sanskrit literature Vol. I. 8. Ramkrishna Mission- cultural heritage of India Vol. I, II & III. 9. Majumdar R. C & Pushalkar A.D- History & culture of the Indian people, Vol. I, II & III. 10. Keith A.B- History of Sanskrit literature. 11. Varadachari V- History of Sanskrit literature Chaitanya Krishna- A new History of Sanskrit	
11	Continuous Internal Assessment: 20 Marks	Semester End Examination : 30 Marks
12	Continuous Evaluation through: Assignment/ Presentations/ Projects (Group/Individual) / Field Visit Report 10 Marks, class Test / MCQ Test 5 Marks, Overall Conduct and Class Participation 5 Marks	
13	Format of Question Paper: for the final examination Q1. Attempt any TWO Questions out of FIVE. 6 Marks Q2. Attempt any THREE Questions out of FIVE 12 Marks Q3. Attempt any THREE Questions out of FIFTEEN. 12 Marks	


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Interdisciplinary Studies
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As Per NEP 2020

University of Mumbai



Title of the Program

**Co-Curricular Course
NATIONAL SERVICE SCHEME**

SEM I & SEM II

Syllabus for Two Credit

(With effect from the academic year 2024-25)

UNIVERSITY OF MUMBAI

National Service Scheme

1.1 Preamble:

Students in the National Service Scheme are better able to comprehend all the most recent ideas. These courses include an Introduction to National Service Scheme that covers the concept of social services, which are a variety of public services meant to offer support and help to targeted specific groups, most often the underprivileged. They could be offered by individuals, autonomous, private entities, or under the management of a government body.

1.2 Objectives of the Course:

1. To Introduce National Service Scheme to learners and explain how it is used in current social studies.
2. To make the students aware of the need of having a foundation in social science and NSS.
3. To introduce students to social concepts and issues in society, as well as to get involved in resolving social issues.

1.3 Learning Outcomes of the Course: The students will be able to

1. The course will help students comprehend the foundations of the National Service Program.
2. To understand the unique camping program.
3. Students will learn about the regular activities of NSS.

1.4. Programme Specific Outcomes:

1. Students will be familiar with NSS fundamentals and history, particularly as they pertain to social work.
2. Students will recognize NSS and its ongoing operations.

1.5 Programme Outcomes:

1. Students will comprehend fundamental ideas and facts about the National Service Program.
2. Students will learn the essentials of NSS-related procedures.
3. Students will learn social work skills (such as Voter Awareness, Campus Cleanup, Tree Plantation, and Rallies).

1.6 Modes of Internal Evaluation: Assignment, Tutorial, Presentation, MCQs via Google, Field Visits, any other suitable mode along with marks for Attendance of the students.

UNIVERSITY OF MUMBAI**Semester I****NSS CC****Sub: - Introduction to National Service Scheme****Credits: 02****Marks:50**

Unit Number	SEMESTER 1 Title of the Unit	No. of Lecture
1	Introduction to National Services Scheme NSS- History,Philosophy & Need of Emergence Aims, Objectives, Motto and Emblem of NSS, NSS Theme Song Organizational Structure of NSS-Hierarchy at different levels (National,State,University,College) Roles and Responsibilities of Program Officer Financial Provisions -Grant in Aid for NSS Advisory committees & their functions	15
2	NSS Programmes and Activities (Regular activities) NSS Programmes and Activities (Special Camp activities) Yearly Action Plan of NSS Unit Volunteerism– Meaning, definition, basic qualities of volunteers, need of volunteerism for National development. Opportunities in NSS for Volunteers (Various Camps) Report Writing	15

UNIVERSITY OF MUMBAI

Semester II

NSS CC

Sub: - Leadership and Community Engagement

Credits: 02

Marks: 50

Unit Number	SEMESTER 2 Title of the Unit	No. of Lecture	No. of Credits
1	Leadership & Personality development: Meaning, definition, qualities, and characteristics of a Leader. Meaning of personality, Dimensions of personality. Personality and Leadership nexus.	15	
	Universal Human Values and Ethics for youths Sustainable Development Goals		
2	Activity Based Programmes (Suggestive list given below. Colleges can plan various social activities for learners and make a detailed report) Activities can be conducted throughout the academic year .Evaluation will be based on record keeping of the attendance of the learner.	30	
	Shramadhan – Plantation, Cleaning, Watering, Weeding, Any other activities.		
	Awareness Programmes – Seminar, Workshops, Celebration of National and International days, Personality Development Programmes, Group Activities, etc.,		
	Rally, Visit to Adopted villages, Swatchatha Programme, Visit and Conserving Ancient monuments and heritage site, Socio Economic Survey of village/slum, Nature Camp, Environmental Education, Women Empowerment Programme, Health Camps, Blood grouping awareness and Blood donation, Legal awareness Programme, Literacy Programme, Water Conservation Programme, One Day Special Camp in a village (preferably in adopted village/Adopted areas/Slums/MR Schools etc).		

Note:

- Above Paper will be exempted if the learner is involved in NSS as Volunteer and Successfully completes 60 hours in each Semester.
- If learner as a NSS Volunteer attends any Camps at National/State/University/District/ College Special Camp will be exempted from either Sem II OR Sem IV Paper provided they produce Certificate of Participation or Attendance in Camp certified by the Programme Officer.

Evaluation Pattern

Internal Assessment

Assessment Criteria	Marks
Assignment / Project / Quiz/Presentations	10
Attendance, Class and Activity Participation	10
Total	20

External Assessment Question Paper Pattern

Time: 1:00 Hours

Total Marks: 30

Introduction:- 1. All questions are compulsory.
2. Figure to the Right indicates full marks.
3. Draw neat labeled drawings wherever necessary.

Q.1) Rewrite the following by choosing the correct options given below
(with four alternatives) 6 Objectives question of 1 mark each **06 marks.**

- | | | | |
|-------|----|----|----|
| 1. a) | b) | c) | d) |
| 2. a) | b) | c) | d) |

Q.2) Short Notes . (Any Two out of Four) **06marks**

- 1.
- 2.
- 3.
- 4.

Q.3) Answer the following questions (Any Three out of Five) **18 marks**

- 1.
 - 2.
 - 3.
 - 4.
 - 5.
-

References:

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2. Salunkhe P.B. Ed, Chhtrapati Shahu the Pillar of Social Democracy
3. National Service Scheme Manual, Govt. of India
4. Training Programme on National Programme Scheme TISS
5. Orientation Courses for N.S.S. Programme Officers, TISS
6. Hans Gurmeet, Case Material as a Training Aid for Field Workers
7. Tarachand, History of the Freedom Movement in India Vol.II
8. Kapil K. Krishan, Social Service Opportunities in Hospitals (TISS)
9. Ram, Social Problems in India.
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18. Clarke, S. (2018). Why your values are key to your leadership. Leaderonomic.com Available: <https://leaderonomics.com/leadership/values-key-leadership>
19. Clarke, N. (2011). An integrated conceptual model of respect in leadership

As Per NEP 2020

University of Mumbai



Title of the Program

**Co-Curricular Course
Introduction to Sports, Physical Literacy,
Health and Fitness and Yog**

SEM I

Syllabus for Two Credit

(With effect from the academic year 2024-25)

Semester I

Course Structure

Semester	Paper	Title of Paper	No of lecture (Theory)	Internal Evaluation (IE)	End Semester Evaluation	Total Marks	Credits
First	CC	Introduction to Sports, Physical Literacy, Health & Fitness and Yoga	30	20	30	50	02
Second	CC	Introduction to Sports, Physical Literacy, Health & Fitness and Yoga	30	20	30	50	02
Total	-	-	60	40	60	100	04

Semester I

1.1 Preamble:

India is growing rapidly as a global super-power. To face the challenges of the century and to keep up with the pace of the world, maintaining health is of prime importance. Giving thrust to healthy society, Physical Education, Sports, Health & fitness and Yoga are of great significance in today's world. The Government of India insists on Physical Fitness, Mental Health and Overall Development of Personality for every citizen. In these lines, the Government has launched Fit India Movement, Khelo India, TOPS and National Sports Day, International Day of Yoga etc. These initiatives have given impetus and awareness among general public, professional and academicians. However, creating efficient and skilled human resource in the field of Physical Education, Sports and Yoga is identified as the need of the hour. Thus, the Governments of India and Government of Maharashtra have included Physical Education, Sports and Yoga as a key area under the NEP 2020.

1.2 Objectives of the Course:

1. To make students familiarize with concepts of Health, Fitness, Yoga, Sports & Physical Literacy.
2. To sensitize the students about background knowledge of Sports structure of Sports Federations, Indian Olympic Association, Khelo India Schemes, FIT India movement, National Sports Day, Intercollegiate Sports structure of University of Mumbai.

3. To familiarize the students with the various physical education concepts and information regarding various Olympic Sports.
4. To make students aware about famous sports personalities and various awards given to Sportsperson and coaches.
5. To educate students regarding various career opportunities in the sports management, sports coaching, sports industry, health and fitness, sports infrastructure, yoga, etc.
6. The course is designed primarily to educate those interested in becoming a Physical Literacy Trainer/Ambassador as well as those who wish to stay lifelong active and want to influence others to be active for life.

1.3 Salient features of the course:

1. The course is designed to enhance the Competency, attitude and skills related knowledge to Physical Literacy, health & fitness, Sports & Yoga.
2. The course is design to implemented as per CBCS pattern .

1.4 Utility of the course:

1. The course may provide opportunity in the field of physical education, sports management, health & fitness, yoga, etc.
2. The course is significant to enhance the abilities of the student to work in the different fields of physical education in the area of coaching, event management, health & fitness, yoga etc.
3. The professional abilities and personality of the students may be enhanced.

1.5 Program outcomes:

By the end of the program the students will be able to:

1. The curriculum would enable the pass out students to be entrepreneur (to start their own fitness center, gym, yoga studio etc.) and device appropriate fitness program for different genders and age groups at all level
2. The curriculum would enable to officiate, supervise various sports events and organize sports events.
3. Students acquire the knowledge of Physical Education, Sports and Yoga and understand the purpose and its development.
4. The student learns to plan, organize and execute sports events.
5. Student will learn theoretical and practical aspects of game of his choice to apply at various levels for teaching, learning and coaching purposes efficiently.
6. Student acquires the knowledge of opted games, sports and yoga and also learns the technical and tactical experience of it.
7. Student will learn to apply knowledge of Physical fitness and exercise management to lead better quality life.
8. Students will understand and learn different dimension of active life style.
9. Student will learn the knowledge of nutrition and diet.
10. Students will be able to assess the physical fitness in a scientific way.
11. The students will be able to continue professional courses and research in Physical Education, sports and yoga.
12. It helps the student to understand theory and practical aspects of physical literacy. These aspects include role of motivation and confidence, how to focus on positive experience, new styles of teaching, inclusive session planning and review the progress in physical activities.

1.6 Programme Duration: The structure of Sports & Physical Literacy has two semesters in total covering a period of two years.

1.7 Duration of the Course:. First Year comprises two semesters. Each semester will have theory paper 30 marks for End Semester Examination and 20 marks for Internal Evaluation for each paper.

1.8 Modes of Internal Evaluation: Assignment, Tutorial, Presentation, MCQs via Google, Field Visits, any other suitable mode along with marks for Attendance of the students.

1.9 Medium of Instruction: English

1.10 Course Structure

Credits: 02

Lectures: 30

Marks: 50

Unit Number	Title of the Unit	No. of Lecture	No. of Credits
1	Introduction to Sports, Physical Literacy, Health & fitness and Yoga 1.1 Meaning and Definition of Sports, Physical Literacy, Health & Fitness and Yoga 1.2 Aim, Objectives & Importance of Sports, Physical Literacy, Health & Fitness and Yoga 1.3 History of Sports, Physical Literacy, Physical Education and Yoga 1.4 Modern trends of Sports, Physical Literacy, Health & Fitness and Yoga	15	1

2	Introduction to Structure of Sports associations, Fitness Training & Yogic Asanas 2.1 Various government schemes, awards and famous sports personalities 2.2 Sports Structure of Sports Federations, Khelo India, Sports Tournaments of University of Mumbai and Indian Olympic Association 2.3 Fundamental Principles of Fitness training and Yoga 2.4 Components of health related and skill related physical fitness 2.5 Types of Yogic practices – Asanas, Pranayama and Meditation	15	1
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References –

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As Per NEP 2020

University of Mumbai



Title of the Program

Introduction to Cultural Activities

SEM I

Syllabus for Two Credit

(With effect from the academic year 2024-25)

Aims and Objectives

- To study the importance of cultural activities in India.
- To discuss the historical importance of cultural activities.
- To define and describe the overview of cultural practices at Indian and Global level.
- To list the various forms of cultural activities and its applied skills.
- To describe the role of organizations for organizing cultural activities in India.

Learning Outcomes

- Understand the significance of cultural activities
- Sensitize students towards Indian culture and its preservation
- Apply the knowledge and skills of the cultural activities in their practical life
- Participate in the various cultural activities

Modules at Glance Semester I

Module No.	Unit	Content	No. of Hours
1	I	Overview to Cultural Activities	05
	II	History of Student Cultural Activities	05
2	III	Forms / Types of Literary and Fine Arts Activities and its Applied Skills	10
	IV	Forms / Types of Performing Arts Activities and its Applied Skills	10
Total No. of Hours			30

Module No.	Unit	Content	No. of Hours
1	I	1.1 Overview to Cultural Activities <ul style="list-style-type: none">• Definition of culture and its manifestations• Understanding cultural diversity and inclusivity• The role of cultural activities in preserving heritage• Overview of Indian cultural practices• Overview of global cultural practices	05
	II	2.1 History of Student Cultural Activities <ul style="list-style-type: none">□ Role of student cultural activities□ History of student cultural activities in India	05

		<ul style="list-style-type: none"> • Role of AIU in preserving cultural heritage of India • History of student cultural activities in Maharashtra • Student Cultural activities at University of Mumbai 	
2	III	<p>3.1 Forms / Types of Literary and Fine Arts Activities and its Applied Skills</p> <p>3.1.1 Various Forms of Literary Arts</p> <ul style="list-style-type: none"> • Elocution: Reading Skills, Soft Skills, Languages, Communication Skills, etc. • Debate: Reading Skills, Soft Skills, Languages, Communication Skills, etc. • Story Writing: Introduction, Plot, Characterization, Presentation, Relevance, Language Style, etc. • Story Telling: Introduction, Plot, Characterization, Presentation, Relevance, Language Style, etc. • Quiz: General Knowledge skills <p>3.1.2 Various Forms of Fine Arts</p> <ul style="list-style-type: none"> • Painting: Visualization, Delivery of the Subject, Composition, Colour Application, Presentation and Overall Impact • Collage: Visualization, Delivery of the Subject, Handling of Medium, Composition, Presentation and Overall Impact • Poster Making: Visualization, Delivery of the Subject, Presentation, Tagline and Overall Impact • Clay Modeling: Visualization, Delivery of the Subject, Handling of Medium, Composition, Presentation and Overall Impact • Cartooning: Visualization, Delivery of the Subject, Characters, Synchronization, Colour Application, Composition, Presentation and Overall Impact • Rangoli: Visualization, Delivery of the Subject, Colour Scheme, Elements, Presentation and Overall Impact • Mehendi Designing: Originality, Creativity, Decorative Art with Aesthetic Sense, Presentation and Overall Impact 	10

		<ul style="list-style-type: none"> • Spot Photography: Impact, Composition, Technical Quality and Suitability for the Specific Theme • Installation: Visualization, Delivery of the Subject, Handling of Medium, Synchronization, Composition, Presentation and Overall Impact 	
	IV	<p>4.1 Forms / Types of Performing Arts Activities and its Applied Skills</p> <p>4.1.1 Various Forms of Dance</p> <ul style="list-style-type: none"> • Folk Dance: History and Origin of Folk Dance In India, Types and their Uniqueness, Significance of Folk Dance, Folk Dances in Maharashtra • Classical Dance: History of Classical Dance, Types and their Peculiarities, Significance of Classical Dances in India <p>4.1.2 Various Forms of Theatre</p> <ul style="list-style-type: none"> • History of Indian Theatre • Types and their Uniqueness • Significance of Indian Theatre • Various Forms of Theatre: One Act Play, Skit, Mime, Mimicry <p>4.1.3 Various Forms of Music</p> <ul style="list-style-type: none"> • History of Indian Music, • Types and their Uniqueness, • Significance of Music in India • Various Forms of Music: Classical Singing, Light Vocal, Percussion, Non-Percussion, Nattasangeet, Western Vocal, Western Instrumental 	10

Scheme of Evaluation

The Scheme of Examination shall be of 50 marks. It will be divided into Internal Evaluation (20 marks) and Semester End Examination (30 Marks).

Semester I (50 Marks, 2 Credits) Internal Evaluation (20 Marks)

Sr. No.	Particulars	Marks
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1	Presentation OR Project OR Assignment	15
2	Participation in Workshop / Conference / Seminar (as decided by the Teacher) OR Participation in Online Workshop / Conference / Seminar (as decided by the Teacher) OR Field Visit OR Attendance	5
Total		20

Semester End Examination (30 Marks)

Question No.	Particulars	Marks
1	Objective Type Questions (All Units)	6
2	Descriptive Question(s) on Unit I [This question may be divided into sub questions like (a) (b) for 3 Marks + 3 Marks or 4 Marks + 2 Marks pattern]	6
3	Descriptive Question(s) on Unit II [This question may be divided into sub questions like (a) (b) for 3 Marks + 3 Marks or 4 Marks + 2 Marks pattern]	6
4	Descriptive Question(s) on Unit III [This question may be divided into sub questions like (a) (b) for 3 Marks + 3 Marks or 4 Marks + 2 Marks pattern]	6
5	Descriptive Question(s) on Unit IV [This question may be divided into sub questions like (a) (b) for 3 Marks + 3 Marks or 4 Marks + 2 Marks pattern]	6
Total		30

Reference Books

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AC –28/06/204

Item No. – 5.6 (N)

University of Mumbai



Syllabus for Extension Work in Vertical VI - CC

Board of Studies in Extension Work

UG First Year Program

Semester

I

Title of Paper

Credit

Extension Work

2

From the Academic Year

2024-25

Introduction

The National Education Policy (NEP) 2020 is a comprehensive framework introduced by the Government of India to revamp the country's education system. It has replaced the previous National Policy on Education, which has aim to ensure universal access to quality education from preschool to higher education, including vocational education. NEP 2020 emphasizes a more holistic, multidisciplinary, and flexible curriculum which lays emphasis on conceptual understanding rather than rote learning allowing students to choose subjects across disciplines without strict boundaries.

The National Education Policy (NEP) 2020 of India addresses the role of higher education institutions in fostering community engagement and extension work. It highlights the social responsibility of higher education institutions towards their communities. It encourages institutions to engage with local communities, address societal challenges, and contribute to sustainable development. The policy promotes the implementation of outreach programs by higher education institutions to disseminate knowledge, provide services, and support community development. These programs may include literacy campaigns, career development programs, social issues awareness programs, health and hygiene initiatives, skill development workshops, and technology-oriented activities. The policy suggests integrating extension work into the curriculum of higher education programs. This allows learners to gain practical experience, develop leadership skills, and contribute to community development while pursuing their studies. It recognizes incentives to encourage active engagement in community service and extension activities.

Overall, NEP 2020 recognizes the significant role of higher education institutions in promoting community engagement, social responsibility, and sustainable development through extension work. By integrating extension activities into their mission and operations, institutions can contribute to building inclusive and resilient societies.

Extension work in the context of education refers to the activities and programs conducted by educational institutions to engage with communities, address societal needs, and promote social development.

Aim of Extension Work under NEP:

- Extension work aims to identify and address the specific needs and challenges faced by communities. NEP 2020 encourages higher education institutions to engage with local communities and contribute to their development by offering programs and services that

address social needs, such as literacy programs, health awareness campaigns, and vocational training.

- Extension work aims to empower communities by providing them with the knowledge, skills, and resources they need to address their own requirements and improve their quality of life.

Key objectives of Extension Work under NEP:

- To ensure equal access to quality education and educational opportunities to aspirants.
- To support the government initiatives in achieving universal foundational literacy and numeracy as per sustainable development program.
- To organize remedial programs to address the learning breaches among the youth and provide unending education opportunities.
- To offer more holistic, multidisciplinary, and flexible curricular activities with an emphasis on conceptual understanding and personality development.
- To offer a wide range of activities & promote critical thinking, creativity, and innovation.
- To provide aspirants with multiple pathways for skill development and employment.
- To implement outreach programs to disseminate knowledge, provide services, and support community development.

Extension Work Activities:

Extension Work activities introduced by DLLE are a crucial aspect of the educational environment, offering multifaceted benefits that extend beyond academic learning. Many extension activities focus on social issues, sustainability, and environmental conservation. These activities educate the communities on sustainable practices which promote inclusivity and social justice. These activities focus especially on training women in various skills, including entrepreneurship and digital literacy through various vocational skill-oriented projects offered by the department. These activities have significantly contributed to skill development among community members, leading to improved employment opportunities and personality development. Learners participate in extension work activities as part of their curriculum, to gain practical experience and to contribute to community development. Thus, engaging in extension work fosters a sense of social responsibility and civic engagement among the learners and facilitators.

THE EXTENSION DIMENSION (Reach to Unreached)

The college students are enrolled for extension work and perform various activities for the **social awareness based on various issues / problems in the society such as Save Girl Child, Pollution, Aids, Global Warming, Environment, Tree Plantation, Importance of Education, Illiteracy, Child Labour, Dowry Deaths, Malnutrition, Watershed Management and so many.** The students are creating awareness about these social problems / issues through various activities such as Street Play, Exhibition, Poster Making, Songs, Speech, Survey, Elocution, and participation in Seminar & Conferences. For this purpose, students are going to remote areas and involve the community and make them aware of our role in eradicating social problems faced by the society and trying to convince the people human duties as an ideal citizen.

To facilitate the sensitization of the student to the socio-cultural realities, the Department offers extension work projects encompassing social issues for the student. There are many Extension Work Projects being offered by the department under the two different units for enhancing the employability and IT skills of the student. The projects are given below, for which the details are available on DLLE website at www.mudlle.ac.in.

I) Vocational Career Oriented Projects

1. Career Project [CP]
2. Industry Orientation Project [IOP]
3. Anna Poorna Yojana [APY]
4. Skill Development (SD)

II) Community Oriented Projects

1. Population Education Club (PEC)
2. Survey Research
3. Education for All (EFA- NIOS, IDOL)
4. Environment Education
5. Civic Sense (CS)
6. Consumer Guidance

Given below are the activities / programs to be conducted by the colleges as a part of Extension Work Syllabus as enlisted. The learner will participate in the following activities during Semester I in this academic year.

ACTIVITIES FOR SEMESTER I = TOTAL 2 Credits

Sr. No.	Unit / Activities	No. of Lectures
1	<p><u>Exhibit your talent (Talent Search Program)</u></p> <p>Talent Search: Need, Aim and Objectives, Nurturing Talent. Usefulness in Extension Work.</p> <p><u>Organizing Talent Search Program.</u></p> <p>The Extension Work Teacher will orient the learners and organize such program during lecture hours.</p> <p>A talent search program is a critical component of modern human resource management that compel sensitization of self-awareness. By systematically identifying, attracting, and nurturing talent, the colleges can build a workforce that is capable, diverse, and aligned with their strategic goals to achieve objectives of extension work.</p> <p>The following talents / skills are expected from learners to conduct training, extension work and field outreach activities. (Organization, Crowd control, Storytelling, Stage performance (singing, acting, musical instrument playing), Script writing, Poetry composition, Drawing & painting, Collage, Drafting and writing report, PPT presentation and Video Making.</p>	<p>Total 8 Lectures including guidance for preparations and actual conduct of program.</p>
2	<p><u>Organizing & Participation in Training Session and Note Making</u></p> <p>Every learner should attend the training session organized by their college for orientation of annual extension work program. Attendance is compulsory.</p> <p>In this session the learners will be oriented about all the extension work topics / activities as enlisted followed by question-and-answer session.</p> <p>The learner must read resource material and guidelines carefully</p>	

	and understand the structure of Extension Work under NEP 2020 and accordingly plan for participation in various programs, college level and field outreach activities as given below. Documentation of the activity and report preparation needs to be completed by the learners.	
3	<p><u>Self- Introductory Video / Stage Performance</u></p> <p>All learners enrolled in Extension Work subject can make self-introductory video or stage performance (3-4 minutes duration) stating his / her name, college, areas of interest, reason to join Extension Work, goals, why did he / she choose the particular topic /activity, how will he/she perform & achieve his/her objectives etc. followed by 2-page report writing to be submitted to college. Report writing proforma to be prepared by college.</p> <p>In this session the learners will be oriented about making self-introductory video/ stage performance, prior preparations, grooming styles and presentation skills, practice sessions and other requirements.</p>	
4	<p><u>Participation in Activities /Programs</u> as given below.</p> <p>- Organize and participate in activities / programs related to five enlisted social issues / government policies. The Learners will be oriented to following activities and motivated to participate in:</p> <ol style="list-style-type: none"> 1. Seminar /conferences, discussion sessions, debate, rallies 2. Competitions (essay/creative writing, elocution, poster/ video/ rangoli making etc.- Minimum 2 competitions) 3. Extension Work group activities of other groups in the college. 4. Prepare your PPT, design your posters / charts. 5. Survey / short term academic courses / innovative programs. <p>Learners should perform and <u>participate in above activities (Minimum 3)</u> related to enlisted topics and strictly follow the guidelines. All the activities / programs must be related to extension work topics to fulfil the DLLE objectives.</p>	20 Lectures including guidance for practice session, preparations and actual conduct of program.

	<p>The learners will be oriented about <u>any 5 Topics</u> selected by college for awareness under Extension Work. The college may select more than 5 topics if the enrolment of learners is more than 200. The learners will participate in above activities based on these topics selected by college.)</p> <ol style="list-style-type: none"> 1. Maharashtra Policy for women. 2. Status of women in India. / Women achievers of modern India 3. Banking procedures. 4. Legal procedures. 5. Violence against women / Laws protecting women/ Inheritance laws. 6. Child Labour. 7. Environment- pollution and its effect / Save Trees and Natural Resources 8. Water Harvesting. 9. Pollution (Noise pollution / industrial pollution etc.) 10. Issues related to LGBT. 11. HIV –AIDS / Covid 19 etc. 12. Consumer Awareness (Act 2019), Need and Importance 13. E-waste management 14. Stress and Harassment. 15. Global warming 16. Importance of Ethics and Values 17. Old Age Homes / Status of Senior Citizens 18. Distance Education Opportunities 19. First Aid Awareness 20. Election Literacy / Voting rights / Human Rights 	
5	<p><u>Report Writing and Final submission of assignment / report</u></p> <p>The learners will be oriented to prepare final assignment / report of the activities to the college. Present report during the college program. Proforma of Report to be prepared by college.</p> <ul style="list-style-type: none"> - College will organize a program in the hall / classroom for all learners and give them opportunity to present their assignment 	2 Lectures

	/ report with PPT presentation followed by question answer session / test / interview by the college.	
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Evaluation Pattern

Internal Assessment

Sr. No.	Assessment Criteria	Maximum Marks
1	Attendance, punctuality, completion of hours, participation in programs, presentations and feedback.	10
2	Proficiency in required skill sets, overall performance, submission of written report / assignments and expected development.	10
	Total	20 Marks

External Assessment

(Based on Extension Work guidelines and five enlisted topics chosen by the college.)

Question Paper Pattern

Time: 1.00 Hours

Total Marks 30

Instructions: 1. All questions are compulsory.

2. Figures to the right indicate maximum marks.

Q.1. Rewrite the following statement by choosing correct alternative given below. - 06 Marks
(6 statements. One mark each)

Q.2. Write short Notes On (Any Two out of Four) - 06 Marks

Q.3. Answer the following questions. (Any Three out of Five) - 18 Marks

References:

- Guidelines for Extension Work published by Department of Lifelong Learning and Extension, University of Mumbai.
- Agricultural Extension: Principles and Methods" by "Ray V. Herren (2008)
- Agricultural Extension by G. S. R. Murthy (2010)
- Introduction to Agricultural Extension by S. S. Acharya (2015)
- Agricultural Extension in Developing Countries by R. W. Snapp (2012)
- Extension Communication and Management by B. M. Panda (2016)

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