Academic Council Meeting No. and Date: 09/ July 02 2024
Agenda Number: 03 **Resolution Number:** 41, 42 / 3.10, 3.30

Vidya Prasarak Mandal's
B. N. Bandodkar College of Science
(Autonomous), Thane

Syllabus for

Programme Code: BUHS

Programme : Bachelor of Science

Specific Programme : Human Science

S.Y.B.Sc. Human Science

Level 5.0

CHOICE BASED GRADING SYSTEM

Revised under NEP

From academic year 2024-2025

Preamble

 The basic thoughts and understanding in the programmeof B.Sc. with Human Science is many or around 60 % students after their graduation leave higher education and opt for jobs. These jobs are in Government offices, Municipal Corporations, private companies or, in schools as teachers. They are absorbed as science graduates. Even when the students opt for management carriers they are considered as science graduates at entry level. Thus the specialization or the major subject does not have relevance unless the students want to pursue the carrier in the field of research or higher education.

 Among all higher studies Masters in management is a most preferred option because of availability of lucrative jobs. Among the specializations in management studies Human Resource Management is one among the preferred choice. When a person works in any office it is needed that the concerned understands the psychology of organization, the co-workers, the officers and also the customers.

 With all these requirements of job market University has decided to introduce the graduation course in Arts and science as B. A. /B. Sc. Human science. In this the topics considered are Origin of Human Science, Evolution of human being, Cultural evolution, Social evolution, Development of communication and language, Anthropology, Family culture, Organization culture, Management techniques and many more. The Bachelor's Degree B.A./B.Sc. Human Sciences is a three year (six semesters) innovative interdisciplinary programme that focuses on understanding the human being holistically from biological, psychological and social perspectives. It helps in comprehending the human being from birth to death with a whole gamut of perspectives from origin, ancient history, its evolution to modern times. It is an amalgamation of various disciplines of sciences namely psychology, sociology, anthropology, paleontology, neuroscience, genetics, home science and other allied spheres of knowledge. A learner with such a vast knowledge and understanding of Human Science will be fit to work in any industry/ Government offices/ Schools or any other place.

 A learner if wish to go for higher education he can opt for Masters in Psychology, Anthropology or Masters in Management.

Prof. Dr. V.D.Mnajramkar
Chairperson, Bos Human Science
VPM's B.N.Bandodkar College of Science (Autonomous), Than

PROGRAMME OUTCOMES (POs) OF BACHELOR OF SCIENCE (B.Sc.)

The Undergraduate Programmes of Science are intended to cater quality education and attain holistic development of learners through the following programme outcomes:

PO1 - Disciplinary Knowledge

Lay a strong foundation of conceptual learning in science. Instil ability to apply science in professional, social and personal life.

PO2 - Inculcation of Research Aptitude

Ignite spirit of inquiry, critical thinking, analytical skills and problem-solving approach which will help learners to grasp concepts related to research methodology and execute budding research ideas.

PO3 - Digital Literacy

Enhance ability to access, select and use a variety of relevant information e-resources for curricular, co-curricular and extracurricular learning processes.

PO4 - Sensitization towards Environment

Build a cohesive bond with nature by respecting natural resources, encouraging eco-friendly practices and creating awareness about sustainable development.

PO5 - Individuality and Teamwork

Encourage learners to work independently or in collaboration for achieving effective results through practical experiments, project work and research activities.

PO6 - Social and Ethical Awareness

Foster ethical principles which will help in developing rational thinking and becoming socially aware citizens. Build an attitude of unbiased, truthful actions and avoid unethical behaviour in all aspects of life.

Eligibility: Passed FYBSc Human Science

Duration: 3 years (Syllabus for Second Year semester III & IV)

Mode of Conduct: Offline lectures/ Online lectures

Discipline/Subject: Human Science

Specific Programme: B.Sc. Human Science

Qualification Title: UG certificate

Discipline/Subject: Human Science

Program Specific outcomes

1.	Recall and explain core principles and theories from psychology, sociology, anthropology, neuroscience, and allied subjects, demonstrating foundational knowledge of human behavior and social systems.	L1
2.	Interpret and compare key concepts across disciplines such as genetics, home science, paleontology, and law to appreciate interdisciplinary connections and their real-world relevance.	L2
3.	Apply discipline-specific methods and analytical techniques to solve practical problems in health, community settings, and legal contexts using appropriate theories and tools.	L3

4.	Analyze complex human and societal phenomena by breaking down data, patterns, and case studies to critically evaluate evidence and underlying causes.	L4
5.	Critically assess policies, research findings, and ethical implications within and across fields like law, neuroscience, and social sciences, justifying conclusions based on criteria.	L5
6.	Design and propose innovative solutions, research projects, or interventions that integrate multidisciplinary knowledge to address societal challenges effectively.	L6
Specific Programme: S.Y.B.Sc. (Human Science)		

Assessment: Weightage for assessments (in percentage) For Major and Minor

Type of Course	Formative Assessment / IA	Summative Assessment
Theory	40%	60%

Curriculum Structure for the Undergraduate degree
Programme S.Y.B.Sc Human Science

	SEMESTER – III		
Course Code	**Major Course Title**	**No. of Lectures in hrs**	**Credits**
24BUHS3T01	Haematology, immunology & epidemiology	30	02
24BUHS3T02	Nutrition & Lifestyle	30	02
24BUHS3P01	Practicals based on23BUHS3T01 and 23BUHS3T02	60	02
Course Code	**Minor Course Title**	**No. of Lectures in hrs**	**Credits**
24BUHS3T03	Health & wellness	30	02
24BUHS3T04	Personality & cognitive psychology	30	02
24BUHS3P02	Practicals based on 23BUHS1T03 and 23BUHS1T04	60	02
	Total	120	06
Course Code	**Generic - Course Title**	**No. of Lectures in hrs**	**Credits**
24BUHS3T05	Management and Organization – Structure, Functioning	30	02
	Total	30	02
Course Code	**AEC Ability Enhancement Course - Course Title**	**No. of Lectures in hrs**	**Credits**
24BU3AEC06	Introduction to Cyber Law and Shaping leaders	30	02
	Total	30	02
Course Code	**Vocational & Skill Enhancement Courses (VSEC)- Course Title**	**No. of Lectures in hrs**	**Credits**
24BU3VSC06	Intelligence & behavior	15	01
	PRACTICALS	30	01
	Total	45	02
Course Code	**Field Project in Human Science I**	**No. of Lectures in hrs**	**Credits**
24BUHS3P03	Field Project in Human Science I	60	02

	SEMESTER – IV		
Course Code	**Major Course Title**	**No. of Lectures in hrs**	**Credits**
24BUHS4T01	**Sex & Fertility**	**30**	**02**
24BUHS4T02	**Basics of Biotechnology**	**30**	**02**
24BUHS4P01	**Practicals based on23BUHS4T01 and 23BUHS4T02**	**60**	**02**
Course Code	**Minor Course Title**	**No. of Lectures in hrs**	**Credits**
24BUHS4T03	**Environmental studies**	**30**	**02**
24BUHS4T04	**Introduction to social psychology & LGBTQ Community**	**30**	**02**
24BUHS4P02	**Practicals based on 23BUHS4T03 and 23BUHS4T04**	**60**	**02**
	Total	**120**	**06**
Course Code	**Generic - Course Title**	**No. of Lectures in hrs**	**Credits**
24BUHS4T05	**Introduction to economics**	**30**	**02**
	Total	**30**	**02**
Course Code	**Indian Knowledge System (IKS)- Course Title**	**No. of Lectures in hrs**	**Credits**
24BU4AEC07	**Introduction to Archeology & Economics**	**30**	**02**
	Total	**30**	**02**
Course Code	**Vocational & Skill Enhancement Courses (VSEC) - Course Title**	**No. of Lectures in hrs**	**Credits**
24BU4VSC04	**Social Perception**	**15**	**01**
	PRACTICALS	**30**	**01**
	Total	**45**	**02**
Course Code	**Field Project in Human Science II**	**No. of Lectures in hrs**	**Credits**
24BUHS4P03	**Field Project in Human Science II**	**60**	**02**

Semester - III

MAJOR COURSE CODE: 24BUHS3T01	(02 Credits)	No of lecture in Hrs. 30

Haematology, Immunology and Epidemiology

COURSE OUTCOME		
Students will be wanted to learn OR on completion of this course, students will be able to learn:		
CO1	Classify the components of blood and blood group	L2
CO2	What is immunology and autoimmune disorders	L1
CO3	Define epidemiology and methods of transmission	L1
CO4	Summarize examples of communicable disorders	L2

Grading will be as 3: High(>60%), 2: Moderate(40%-60%), 1: Low(<40%), 0: No mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	0	0	0	0	0	3
CO 2	0	0	0	0	0	3
CO 3	0	0	0	0	0	3
CO4	0	0	0	0	0	3

Unit	Description	No. of Hours.
I	**Introduction to haematology & immunology:** • Composition of Blood, RBC, WBC& Platelets, • Blood groups and Blood banks • Introduction to Immunology • Immunoglobins • Autoimmune Diseases –Definition and Reasons-Inflammatory bowel disease, Myasthenia gravis, Psoriasis, Rheumatoid arthritis, Celiac Disease.	15
II	**Introduction to Epidemiology** • Introduction to Epidemiology – Definition, Air borne, vector borne, water borne diseases • Communicable diseases: Diagnosis, transmission, prevention, control measures of-Tuberculosis, polio myelitis, dengue, covid 19, leptospirosis, Ebola, Ascariasis, filariasis.	15

REFERENCES

24BUHS3T01

1. Chatterjee, C. C. Human Physiology, Vol. I & II. Central Book Agency.

2.	Guyton, A. C., & Hall, J. Textbook of Medical Physiology. Elsevier.
3.	Ganong, W. Review of Medical Physiology. McGraw Hill.
4.	Tortora, G. J., & Derrickson, B. Principles of Anatomy & Physiology. Wiley.
5.	Abbas, A. K., Lichtman, A. H. Basic Immunology. Elsevier.
6.	Janeway, C. Immunobiology. Garland Science.
7.	Park, K. Preventive and Social Medicine. Bhanot.
8.	CDC & WHO Manuals on Epidemiology.
9.	Ananthanarayan & Paniker. Textbook of Microbiology. Orient Blackswan.
10.	Jawetz et al. Medical Microbiology. McGraw Hill.

MAJOR COURSE CODE: 24BUHS3T02	**(02 Credits)**	**No of lecture in Hrs. 30**

Nutrition & Lifestyle

COURSE OUTCOME

Students will be wanted to learn OR on completion of this course, students will be able to learn:

CO1	Summarize basic food groups, balanced diet and malnutrition during pregnancy	L2
CO2	List disorders associated with vitamin and mineral deficiency and diet	L4
CO3	Explain importance of nutrition, cuisine, modern lifestyle, and disorders	L2
CO4	Summarize stress management and ill effects of using TV and mobile phones	L2

Grading will be as 3: High(>60%), 2: Moderate(40%-60%), 1: Low(<40%), 0: No mapping

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**
CO 1	2	0	0	0	0	0
CO 2	2	0	0	0	0	0
CO 3	2	0	0	0	0	0
CO 4	2	0	0	0	0	0

Unit	**Description**	**No. of Hours**
I	**Health and Nutrition:** • Basic food groups • Balanced diet and recommended dietary allowances • Under-nutrition and deficiency: Anemia, Vitamin A , vitamin B,Vitamin D, Iodine and other deficiency disorders • Mal-nutrition during pregnancy and lactation, infant. • Diet related chronic diseases namely overweight and obesity, cardiovascular disease, diabetes, osteoporosis, cancer	**15**

II	**Health and Lifestyle:** • Type of food available • Types of tools used, inventions like fire • Development from Hunters to Food gatherers and Farmers • Traditional costumes • Traditional arts and crafts	15

REFERENCES	
24BUHS3T02	
1.	Swaminathan, M. Essentials of Food & Nutrition. BAPPCO.
2.	Srilakshmi, B. Nutrition Science. New Age.
3.	Mudambi & Rajagopal. Fundamentals of Foods & Nutrition. Wiley.
4.	Bamji et al. Textbook of Human Nutrition. Oxford.
5.	Park, K. Preventive and Social Medicine. Bhanot.
6.	Whitney & Rolfes. Understanding Nutrition. Cengage.
7.	WHO. Nutrition Guidelines.
8.	ICMR. Recommended Dietary Allowances.
9.	Gopalan, C. Nutritive Value of Indian Foods. NIN.
10.	National Institute of Nutrition Publications.

MAJOR COURSE CODE: 24BUHS3T03	**(02 Credits)**	**No of lecture in Hrs. 30**

Health & wellness

COURSE OUTCOME		
Students will be wanted to learn OR on completion of this course, students will be able to learn:		
CO1	List different types of illness, allergies, infections and disorders caused due to allergies	L1
CO2	List different types of common diseases/CVDs and cancer	L1
CO3	Explain public, occupational, and global health and issues	L2
CO4	Summarize communicable and non-communicable, family planning and birth control methods	L2

Grading will be as 3: High(>60%), 2: Moderate(40%-60%), 1: Low(<40%), 0: No mapping

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**
CO 1	1	0	0	0	0	0
CO 2	0	0	0	0	0	2
CO 3	0	0	0	0	0	3
CO4	0	0	0	0	0	2

Unit	Description	No. of Hours.
I	**Health** • Infections: Bacterial and fungal infections of Skin, Respiratory track, Intestinal track, Ear, Eye. • Allergic reactions on skin, Respiratory track, Intestinal track. • Abdominal and Intestinal diseases • Dental Disorders – dental carries and dental pain • Skeletal Muscular Systems – back pain, spondylosis • Central Nervous System – impairment of neurological development, peripheral nerve damage and headaches • Common diseases – malaria, chicken pox, septic wounds, congenital abnormalities, • Cardiovascular diseases. • Cancer types, cause, treatment.	15
II	**Public Health Hazzard and Health Care :** • Public health studies (Functions,Interventions,Future) • Contemporary Health issues. • Communicable and non-communicable diseases • Occupational health and hazards • Global and local health issues • Maternal , child health care • Family planning and birth control methods.	15

REFERENCES

24BUHS3T03

1. Park, K. Preventive and Social Medicine. Bhanot.
2. Detels et al. Oxford Textbook of Public Health. Oxford.
3. Gordon, B. Community Health Nursing. Mosby.
4. WHO. Global Health Reports.
5. Stanhope & Lancaster. Public Health Nursing. Elsevier.
6. Kumar & Clark. Clinical Medicine. Elsevier.
7. CDC Health Manuals.
8. Harrison's Principles of Internal Medicine.
9. National Health Mission Documents (India).
10. UNICEF Health & Wellness Reports.

MAJOR COURSE CODE: 24BUHS3T04	(02 Credits)	No of lecture in Hrs. 30
Personality & cognitive psychology		
COURSE OUTCOME		

Students will be wanted to learn OR on completion of this course, students will be able to learn:		
CO1	Explain psychoanalysis, behaviourist, socio-cognitive and humanistic theories of personality	L2
CO2	Summarize trait, biological view of personality and assessments of personality	L2
CO3	Define nature and definition along with problem solving and creative thinking	L2
CO4	Classify types of thinking along with concept formation and categorization and types of reasoning	L2

Grading will be as 3: High(>60%), 2: Moderate(40%-60%), 1: Low(<40%), 0: No mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	1	0	0	0	0	0
CO 2	1	0	0	0	0	0
CO 3	1	0	0	0	0	0
CO4	1	0	0	0	0	0

Unit	Description	No. of Hours.
I	**Theories of Personality :** • An overview of Theories of Personality • Sigmund Freud and Psychoanalysis • The Behaviourist view of Personality • The Social Cognitive view of Personality • Humanism and Personality • Trait Theories • The biology of Personality: Behavioural Genetics • Assessment of Personality • Applying Psychology – Personality testing on the internet	**15**
II	**Thinking and Reasoning:** • Definition and nature of thinking • Kinds of thinking • Problem solving • Concept formation and categorization: prototypes, hierarchies of concepts. • Reasoning: deductive, inductive reasoning Creative thinking	**15**

REFERENCES

24BUHS3T04

1. Baron, R. A. Psychology. Pearson.
2. Schultz & Schultz. Theories of Personality. Cengage.
3. Hall & Lindzey. Theories of Personality. Wiley.
4. Passer & Smith. Psychology. McGraw Hill.
5. Goldstein, E. Cognitive Psychology. Cengage.
6. Solso et al. Cognitive Psychology. Pearson.
7. Morgan & King. Introduction to Psychology. McGraw Hill.

8.	Sternberg, R. Thinking and Problem Solving. Academic Press.
9.	Eysenck, H. Personality. Routledge.
10.	NCERT Psychology Textbooks.

MAJOR COURSE CODE: 24BUHS3P01	**(02 Credits)**	**No of lecture in Hrs. 60**

Practical based on 23BUHS3T01and 23BUHS3T02

COURSE OUTCOME

Students will be wanted to learn OR on completion of this course, students will be able to learn:

CO 1	Examine different blood groups effect of different NaCl Concentration on RBC and haemin crystal	L4
CO 2	Analyze enumeration of RBC, WBC and differential WBC count	L4
CO 3	Identify types of viruses, parasites, formed elements, leukemia, ELISA	L3
CO 4	Interpret blood report, ESR, Haemoglobinometer bleeding-clotting time	L5

Grading will be as 3: High(>60%), 2: Moderate(40%-60%), 1: Low(<40%), 0: No mapping

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**
CO 1	3	0	0	0	0	0
CO 2	3	0	0	0	0	0
CO 3	3	0	0	0	0	0
CO 4	3	0	0	0	0	0

1.	Blood group testing
2.	Determination of haemin Crystal
3.	To study various blood reports & interpretation
4.	Enumeration of RBC (Total count)
5.	Enumeration of WBC (Total count)
6.	To study the effect of different NaCl concentration on structure of RBC
7.	Haemoglobinometer – Operation & its uses
8.	Study of Parasites – Plasmodium, Enterobius, Ascaris, Wucheria, Tapeworm
9.	Study of Virus – Polio / H1N1 / AIDS / COVID19
10.	Erythrocyte sedimentation rate
11.	Differential count of leukocytes
12.	Idetification- ELISA
13.	Identification- Leukemia cell slide
14.	Identification of different formed elements
15.	Bleeding time- Clotting time test

REFERENCES	
24BUHS3P01	
1.	Plummer, D. Practical Biochemistry. McGraw Hill.
2.	Jayaraman, J. Laboratory Manual in Biochemistry. Wiley.
3.	Godkar, P. Textbook of Medical Laboratory Technology. Bhalani.
4.	WHO Laboratory Manuals.
5.	Chatterjee, C. C. Human Physiology Practical.
6.	Ananthanarayan. Microbiology Practical Manual.
7.	APHA. Standard Methods of Analysis.
8.	NIN Practical Guidelines.
9.	NCERT Biology Practical Manual.
10.	UGC Model Practical Curriculum.

MINOR COURSE CODE: 24BUHS3P02	**(02 Credits)**	**No of lecture in Hrs. 60**

Practical based on 24BUHS3T03and 24BUHS3T04

COURSE OUTCOME

Students will be wanted to learn OR on completion of this course, students will be able to learn:

CO 1	Demonstrate different staining methods health assessment including pregnancy testing	L2
CO 2	Apply principles of human nutrition to plan balance diet asses BMI and evaluate nutritional status by preparing recipes for healthy breakfast	L3
CO 3	Analyze protein and cholesterol estimation from different food samples and study their nutritive value	L4
CO 4	Identify skin disease, dentition, and different types of food grains lentils and fibrous food	L2

Grading will be as 3: High(>60%), 2: Moderate(40%-60%), 1: Low(<40%), 0: No mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	3	0	0	0	0	0
CO 2	3	0	0	0	0	0
CO 3	3	0	0	0	0	0
CO 4	3	0	0	0	0	0

1.	Pregnancy Test using test kit
2.	Recipe for healthy breakfast
3.	Preparation of balanced diet chart
4.	Study of Body Mass Index formula relating to weight & height
5.	Determination of nutrition status by BMI
6.	Protein estimation by Folin-Lowry method in Pulses

7.	Study of nutritional deficiency diseases
8.	Study of microbial staining
9.	Identification of food grains, Lentils & fibrous foods
10.	Study of nutritional value of Tin and canned food (Research project)
11.	Study of skin diseases (Research Project)
12.	Estimation of Cholesterol Content from different food samples (Research Project)
13.	To study the dentition in mammals -Dental formula & compare with human dentition

REFERENCES

24BUHS3P02

1. Srilakshmi, B. Nutrition Science. New Age.
2. Swaminathan, M. Food & Nutrition Practical. BAPPCO.
3. Singh, A. K. Tests, Measurements & Research Methods. Bharati Bhawan.
4. Kuppuswamy, B. Manual of Psychological Experiments. Konark.
5. Anastasi & Urbina. Psychological Testing. Pearson.
6. WHO Health Assessment Manuals.
7. NCERT Psychology Lab Manual.
8. Park, K. PSM Practical Guidelines.
9. NIN Manuals.
10. APA Ethical Guidelines.

	Generic	**Credits 02**
Course code 24BUHS3T05:	**Course title - Management and Organization – Structure, Functioning**	**No of lectures in hrs 30**

COURSE OUTCOME

Students will be wanted to learn OR on completion of this course, students will be able to learn:

CO 1	Recall concept & types of management, skill, nature, scope ,challenges, evolution and approaches	L1
CO 2	Explain the planning process supports decision making and influences organizational structure and design in a business organization	L2
CO 3	Outline CSR, institutional responsibilities, OCB	L2
CO 4	Explain relationship between objective and hierarchy & green practices	L2

Grading will be as 3: High(>60%), 2: Moderate(40%-60%), 1: Low(<40%), 0: No Mapping

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**
CO 1	0	0	0	0	2	0
CO 2	0	0	0	0	2	0
CO 3	0	0	0	0	2	0

CO 4	0	0	0	0	2	0

	Course: Generic – I	
Unit I	**Management approaches & skills**	**No. of Lectures**
I	• Nature Scope and process of management, historical evolution of management & its foundation. • Types of Management • Different approaches and systems of management, • Types of skills, roles and modern challenges. • Management Planning Process, Managerial decision Making • Introduction to Organizing, Organizational Structure and Its Dimensions. • Different Types of Organizational Design and Their Advantages and Disadvantages.	**15**
II	**Organizations & social responsibility** • Relationship between organization objectives and organization hierarchy • Auxiliary Staff and line staff. • OCB-Organizational, Citizenship Behaviour. • Corporate social responsibility & Institutional Social Responsibility. • Go green concept in various industries/organisation	**15**

REFERENCES

24BUHS3T05

1.	Koontz & Weihrich. Essentials of Management. McGraw Hill.
2.	Robbins, S. P. Organizational Behavior. Pearson.
3.	Drucker, P. Management. Harper.
4.	L. M. Prasad. Principles of Management. Sultan Chand.
5.	Stoner & Freeman. Management. Prentice Hall.
6.	Tripathi & Reddy. Principles of Management. Tata McGraw Hill.
7.	CSR & ESG Reports (India).

	AEC - ABILITY ENHANCEMENT COURSE	**Credits 02**
Course code 24BU3AEC06:	**Course title - Introduction to Cyber Law and Shaping leaders**	**No of lectures in hrs 30**

COURSE OUTCOME

Students will be wanted to learn OR on completion of this course, students will be able to learn:

CO 1	Recall key concepts of leaderships, its element, styles, and its functions	L1
CO 2	Explain qualities, theories, and challenges of modern leadership	L2
CO 3	Analyze the classification, modus operandi and legal implication of cybercrime, including offences, targeting computers , mobiles , children, women and financial system	L4
CO 4	Apply appropriate reporting procedure, remedial measures, and provisions of the IT Act, 2000.	L3

Grading will be as 3: High(>60%), 2: Moderate(40%-60%), 1: Low(<40%), 0: No Mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	0	0	0	0	0	3
CO 2	0	0	0	0	0	3
CO 3	0	0	0	0	0	3
CO 4	0	0	0	0	0	3

	Course: AEC	
Unit I	**Shaping the leaders**	**No. of Lectures**

I	• Leadership: Elements of leadership in work group • The quality of modern leadership • Leadership theories and leadership styles • The role of power and the role of expectations • Leadership functions • Characteristics of successful leaders • Pressures and problems of leaders • Difference between manager and leader	**15**
II	**Cyber crime and cyber law** • Classification of cyber crimes, Common cyber crimes- cyber crime targeting computers and mobiles. • cyber crime against women and children, financial frauds, social engineering attacks, malware and ransomware attacks, zero day and zero click attacks, Cybercriminals modus-operandi. • Reporting of cyber crimes, Remedial and mitigation measures, Legal perspective of cyber crime. • IT Act 2000 and its amendments, Cyber crime and offences, Organisations dealing with Cyber crime and Cyber security in India, Case studies.	**15**

REFERENCES

24BU3AEC06

1.	S. K. Verma. Cyber Law in India. LexisNexis.
2.	Talukdar, D. Cyber Crimes & Cyber Laws. Oxford.
3.	Northouse, P. Leadership: Theory & Practice. Sage.
4.	Robbins, S. Organizational Behavior. Pearson.
5.	IT Act 2000 & Amendments.
6.	Ministry of Home Affairs – Cyber Crime Portal.
7.	Indian Computer Emergency Response Team (CERT-In).

	VSEC -Vocational & Skill Enhancement Courses	**Credits 02**

Course code 24BU3VSC06	Course title - Intelligence & behavior	No of lectures in hrs 45

COURSE OUTCOME

Students will be wanted to learn OR on completion of this course, students will be able to learn:

CO 1	Analyse different Intelligence theories	L4
CO 2	Compare differences in Intelligence	L5
CO 3	Interpret various scales of Intelligence	L2
CO 4	Assess various aspects of Intelligence	L5

Grading will be as 3: High(>60%), 2: Moderate(40%-60%), 1: Low(<40%), 0: No Mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	1	0	0	0	0	0
CO 2	1	0	0	0	0	0
CO 3	1	0	0	0	0	0
CO 4	1	0	0	0	0	0

	Course: VSEC	
Unit I	**Intelligence & Behavior**	**No. of Lectures**
I	• Individual differences and Intelligence theories • Individual differences, major areas of differences, heredity v/s environment, • Intelligence -what is it? Measurement of Intelligence and Intelligence Scales • What is IQ, IQ and behaviour?	**15**

VSEC Practical

1.	Big 5 inventory (Personality test)
2.	Nine dot problem
3.	Self-esteem scale
4.	Case study and identify the psychological theories.
5.	Method of Loci
6.	Special school visit & report
7.	IQ test (general intelligence test)
8.	Buss- Perry aggression questionnaire
9.	Sinha's comprehensive anxiety test
10.	Emotional intelligence scale

REFERENCES

24BU3VSC06

1.	Anastasi & Urbina. Psychological Testing. Pearson.
2.	Wechsler, D. Intelligence Scale Manual.

3.	Sternberg, R. Human Intelligence. Cambridge.
4.	Eysenck, H. Intelligence. Routledge.
5.	Jensen, A. Bias in Mental Testing. Free Press.
6.	NCERT Psychology Textbooks.
7.	Singh, A. K. Psychological Measurement.

	Field Project in Human Science I	**Credits 02**
Course code 24BUHS3P03	**Course title - Field Project in Human Science I**	**No of lectures in hrs 60**

COURSE OUTCOME

Students will be wanted to learn OR on completion of this course, students will be able to learn:

CO 1	Apply theoretical concepts through industrial, banking, and field visits.	L3
CO 2	Analyze case studies and collected data ,trends and patterns,	L4
CO 3	Evaluate leadership qualities and environmental findings for report preparation	L5
CO 4	Asses films/books and prepare practical outputs like diet charts	L5

Grading will be as 3: High(>60%), 2: Moderate(40%-60%), 1: Low(<40%), 0: No Mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	1	0	0	0	0	0
CO 2	1	0	0	0	0	0
CO 3	1	0	0	0	0	0
CO 4	1	0	0	0	0	0

	Field Project in Human Science I
1.	Industrial visit report for study the organizational management.
2.	Presentation of case study related to cybercrime.
3.	To collect the data of environment related issues from print media and present the data.
4.	To study blood groups during blood donation camps and make comparative data & Present the same.
5.	Interview leaders from different fields and present the report.
6.	Film/Book review on syllabus related topics.
7.	RBI or any bank visit.
8.	Collection of Data to work on population dynamic and statistic application.
9.	Field visit/ Excursion / Biodiversity visits.
10.	Presentation & preparation of balance diet chart

Semester - IV

MAJOR COURSE CODE: 24BUHS4T01	(02 Credits)	No of lecture in Hrs. 30

Sex & Fertility

COURSE OUTCOME		
Students will be wanted to learn OR on completion of this course, students will be able to learn:		
CO1	Recall structure of Male reproductive system (L1)	L1
CO2	Recall female reproductive system and reproductive cycle (L2)	L2
CO3	List sex hormones related disorders in female and male (L1)	L1
CO4	Categorize disorders related to puberty, infertility and cancer related to reproductive systems (L4)	L4

Grading will be as 3: High(>60%), 2: Moderate(40%-60%), 1: Low(<40%), 0: No mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	3	0	0	0	0	0
CO 2	3	0	0	0	0	0
CO 3	3	0	0	0	0	0
CO4	3	0	0	0	0	0

Unit	Description	No. of Hours.

I	**Reproductive systems:** • Internal male reproductive system • External male reproductive system • Accessory sex glands • Internal female reproductive system • External female reproductive system • Reproductive cycle	**15**
II	**Sex Hormone related disorders & diseases** • Hirsutism, virility , • Hermaphroditism and types • Infertility- in male and female • Disorder of Puberty- Precocious puberty & delayed puberty • Menstrual Failure, menopause, andropause • PCOD • Breast cancer • Prostate cancer	**15**

REFERENCES	
24BUHS4T01	
1.	Tortora & Derrickson. Principles of Anatomy & Physiology. Wiley.
2.	Guyton & Hall. Medical Physiology. Elsevier.
3.	Ganong, W. Review of Medical Physiology. McGraw Hill.
4.	Chaurasia, B. D. Human Anatomy. CBS.
5.	Sadler, T. Langman's Medical Embryology. Wolters.
6.	Park, K. Preventive & Social Medicine.
7.	WHO Reproductive Health Manuals.
8.	Harrison's Internal Medicine.
9.	Dutta, D. Textbook of Gynecology.
10.	Jeffcoate. Principles of Gynecology.

MAJOR COURSE CODE: 24BUHS4T02	**(02 Credits)**	**No of lecture in Hrs. 30**
Basics of Biotechnology		
COURSE OUTCOME		
Students will be wanted to learn OR on completion of this course, students will be able to learn:		
CO1	List examples of transgenic crops and animals	L4
CO2	Explain production and marketing of BT products	L2
CO3	Outline applications if biotechnology in the field of pharmaceutical, nutritional sciences and medical sciences	L2
CO4	Illustrate construction of Vectors	L2
Grading will be as 3: High(>60%), 2: Moderate(40%-60%), 1: Low(<40%), 0: No		

mapping						
	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**
CO 1	3	0	0	0	0	0
CO 2	3	0	0	0	0	0
CO 3	3	0	0	0	0	0
CO 4	3	0	0	0	0	0

Unit	Description	No. of Hours
I	**Genetically modified products** • Application in agriculture (Nitrogen Fixation, GM crop- papaya, tomato ,Potato, Maize, Soy bean) • Biotechnological application in livestock improvement: Transgenic animals. • Production and marketing of GM CROPS. • Plant based vaccines • Industrial production of acetic acid and citric acid. • BT Products	**15**
II	**Application of biotechnology** • Application of Biotechnology in Pharmaceutical industry (production of hormones). • Biomolecules of nutritional significance- Antioxidants (Bioflavonoid, phytochemicals, Lycopene, Anthocyanin. • Genetic engineering in Ecoli & other Prokaryotes, Yeast, Fungi & Mammalian cells • Cloning vectors- Plasmids (pBR 322, pUC) • Vectors for plant & animal cells • Shuttle vectors, YAC vectors, Expression vectors • Applications of regenerative stem cells	**15**

REFERENCES

24BUHS4T02

1.	Dubey, R. C. Textbook of Biotechnology. S. Chand.
2.	Primrose & Twyman. Principles of Gene Manipulation. Wiley.
3.	Brown, T. A. Gene Cloning & DNA Analysis. Wiley.
4.	Snustad & Simmons. Principles of Genetics. Wiley.
5.	Alberts et al. Molecular Biology of the Cell. Garland.
6.	Gupta, P. K. Elements of Biotechnology. Rastogi.
7.	Watson et al. Molecular Biology of the Gene. Pearson.
8.	NCERT Biotechnology.
9.	WHO Biotechnology Reports.
10.	FAO GM Crop Reports.

MAJOR COURSE CODE: 24BUHS4T03	(02 Credits)	No of lecture in Hrs. 30

Environmental studies

COURSE OUTCOME		
Students will be wanted to learn OR on completion of this course, students will be able to learn:		
CO1	Summarise the climate systems and environmental laws	L2
CO2	Recall human climate interaction and climate change	L1
CO3	Recall sources, effects and control measures of air and water pollution	L1
CO4	Recall sources, effects and control measures of Soil and Noise pollution	L1

Grading will be as 3: High(>60%), 2: Moderate(40%-60%), 1: Low(<40%), 0: No mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	0	0	0	2	0	0
CO 2	0	0	0	2	0	0
CO 3	0	0	0	2	0	0
CO4	0	0	0	2	0	0

Unit	Description	No. of Hours.
I	**Environmental Science & laws** • Introduction to Climate Systems: Atmosphere, Hydrosphere, Lithosphere, Cryosphere, Biosphere. • Human – Climate Interactions: Impacts of Natural Calamities on humans (E.g. Floods, Tsunami, Cyclones and Earthquakes) · Impacts of Human activities on Climate (Eg. Acid rains, Ozone • depletion, Global Warming,climate change, Greenhouse effect, El Nino and La Nina) • Climate change- Causes and impacts. • Introduction to Environmental Laws: Air Act (1981), Water Act (1974), Noise Pollution Act (2000), Environment Protection Act (1986), Forest Act (1927)	**15**
II	**Environmental pollution and anthropological activities** • Air Pollution: Sources, effects and control measures • Water Pollution: Sources, effects and control measures • Soil Pollution: Sources, effects and control measures • Noise Pollution: Sources, effects and control measures • Waste management	

REFERENCES

24BUHS4T03

1. Cunningham & Cunningham. Environmental Science. McGraw Hill.
2. Miller & Spoolman. Environmental Science. Cengage.
3. Rajagopalan. Environmental Studies. Oxford.
4. Odum, E. P. Fundamentals of Ecology. Cengage.

5.	Bharucha, E. Environmental Studies. Universities Press.
6.	Environmental Protection Acts (India).
7.	CPCB Manuals.
8.	UNEP Reports.
9.	IPCC Climate Reports.
10.	MoEFCC Publications.

MAJOR COURSE CODE: 24BUHS4T04	**(02 Credits)**	**No of lecture in Hrs. 30**

Introduction to social psychology & LGBTQ Community

COURSE OUTCOME

Students will be wanted to learn OR on completion of this course, students will be able to learn:

CO1	Define the fundamental concepts of social psychology	L1
CO2	Illustrate concepts of social psychology and how they affect in real life	L2
CO3	Compare between sex, gender, sexual orientation and its categories	L2
CO4	List different symbols, flags, and psychosocial issues of LGBTQ+ community	L1

Grading will be as 3: High(>60%), 2: Moderate(40%-60%), 1: Low(<40%), 0: No mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	0	0	0	0	0	2
CO 2	0	0	0	0	0	2
CO 3	0	0	0	0	0	2
CO4	0	0	0	0	0	2

Unit	Description	No. of Hours.
I	**Social psychology- I :** • Social Psychology: A working definition • Social Psychology : Scientific Nature • Focus on Individual Behaviour • Causes of Social Behaviour and Thought • Brief History of Social Psychology Social cognition: • Schemas: Mental Frameworks for organizing and using social information. • Heuristics • Automatic and controlled processing: basic modes of social thought. • Potential Sources of error in social cognition. • Affect and Cognition: how feelings shape thought and thought shapes feelings.	**15**
II	**LGBTQ spectrum** • Sex, gender identity & sexual orientation • LGBTQ+ community • Transgender, Third gender, lesbian, Gay. • LGBTQ flags & symbol • Psychosocial issues related to sex and fertility & acceptance.	**15**

REFERENCES	
24BUHS4T04	
1.	Baron & Byrne. Social Psychology. Pearson.
2.	Myers, D. Social Psychology. McGraw Hill.
3.	Aronson et al. Social Psychology. Pearson.
4.	APA. Guidelines on Sexual Orientation & Gender Identity.
5.	WHO LGBTQ Health Reports.
6.	NCERT Psychology.
7.	Hogg & Vaughan. Social Psychology. Pearson.
8.	Indian Supreme Court Judgments (Section 377).
9.	UNICEF LGBTQ Reports.
10.	Government of India Social Justice Publications.

MAJOR COURSE CODE: 24BUHS4P01	**(02 Credits)**	**No of lecture in Hrs. 60**

Practical based on 24BUHS4T01and 24BUHS4T02

COURSE OUTCOME

Students will be wanted to learn OR on completion of this course, students will be able to learn:

CO 1	Examine DMC/ MBRT/ Meat tenderization.	L4
CO 2	Demonstrate wrapping / streaking and preparation of slant / butt and plates	L2
CO 3	Inference E.Coli growth curve and colony characters.	L4
CO 4	Develop AGE and PAGE	L3

Grading will be as 3: High(>60%), 2: Moderate(40%-60%), 1: Low(<40%), 0: No mapping

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**
CO 1	2	0	0	0	0	0
CO 2	2	0	0	0	0	0
CO 3	2	0	0	0	0	0
CO 4	2	0	0	0	0	0

1.	Meat tenderization
2.	Milk MBRT (Methylene blue reduction test)
3.	Wrapping technique
4.	Streaking technique
5.	Preparation of slants, butt & plates
6.	Isolation of organisms & study of colony characteristics
7.	Study of E. coli growth curve
8.	Horizontal gel electrophoresis
9.	Polyacrylamide gel electrophoresis
10.	Direct microscopic count (DMC) of milk

REFERENCES	
24BUHS4P01	
1.	Plummer, D. Practical Biochemistry. McGraw Hill.
2.	Jayaraman, J. Biochemical Techniques. Wiley.
3.	Cappuccino & Sherman. Microbiology Lab Manual. Pearson.
4.	Karp, G. Cell Biology. Wiley.
5.	WHO Lab Manuals.
6.	NCERT Practical Manual.
7.	Alberts et al. Molecular Cell Biology.
8.	APHA Standard Methods.
9.	FAO Food Testing Manuals.
10.	UGC Practical Guidelines.

MINOR COURSE CODE: 24BUHS4P02	**(02 Credits)**	**No of lecture in Hrs. 60**

Practical based on 24BUHS4T03and 24BUHS4T04

COURSE OUTCOME

Students will be wanted to learn OR on completion of this course, students will be able to learn:

CO 1	Evaluate different water samples by using various parameter	L5
CO 2	Determine pH of soil water and working of pH meter	L5
CO 3	Outline case studies related to natural and manmade calamities	L2
CO 4	Identify air and sound pollution monitoring devices pollution indicators and organism used in bioremediation	L2

Grading will be as 3: High(>60%), 2: Moderate(40%-60%), 1: Low(<40%), 0: No mapping

	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**
CO 1	2	0	0	0	0	0
CO 2	2	0	0	0	0	0
CO 3	2	0	0	0	0	0
CO 4	2	0	0	0	0	0

1.	Estimate of Dissolved oxygen from given water sample
2.	Estimate amount of free Carbon dioxide from given water sample
3.	Estimate phosphate-phosphorous from given water sample
4.	Estimate nitrate- nitrite in given water sample
5.	Determine pH of water sample with pH paper and Universal Indicator.
6.	Determine pH of Soil sample with pH paper and Universal Indicator
7.	Study of sound pollution monitoring & measuring instruments- HVS, Decibel meter
8.	Estimate BOD of given sample of water
9.	Estimate COD of given sample of water

10.	Study of air pollution monitoring devices- Electrostatic precipitators, Fabric filters, Gravity Setting chambers, Catalytic convertor
11.	Demonstration and working of pH meter.
12.	Identification of indoor plants to reduce pollution
13.	Case studies related to natural calamities
14.	Case studies related to Man-made disasters
15.	Identification of biological pollution indicators & bioremediation

REFERENCES	
24BUHS4P02	
1.	Trivedy & Goel. Chemical & Biological Methods for Water Pollution. Karad.
2.	APHA. Standard Methods for Water Analysis.
3.	Peavy & Row. Environmental Engineering. McGraw Hill.
4.	CPCB Manuals.
5.	WHO Water Quality Guidelines.
6.	UNEP Publications.
7.	Odum, E. Ecology.
8.	MoEFCC Reports.
9.	Environmental Impact Assessment Manuals.
10.	NCERT Environmental Practical Manual.

	Generic	**Credits 02**
Course code 24BUHS4T05:	**Course title - Introduction to Economics**	**No of lectures in hrs 30**
COURSE OUTCOME		

Students will be wanted to learn OR on completion of this course, students will be able to learn:		
CO 1	Relate concepts of micro economics, production, demand and supply	L1
CO 2	Explain demand types, elasticity, forecasting and consumer surplus	L2
CO 3	Identify market forms, and price determination methods	L1
CO 4	Analyse market strategies, consumer behaviour and WTO policies	L4

Grading will be as 3: High(>60%), 2: Moderate(40%-60%), 1: Low(<40%), 0: No Mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	0	0	0	0	0	3
CO 2	0	0	0	0	0	3
CO 3	0	0	0	0	0	3
CO 4	0	0	0	0	0	3

	Course: Generic	
Unit I	**Basic economics**	**No. of Lectures**
I	• Micro economics- Meaning-Definition- Features- Distinction between Micro Economics and Marco Economics. • Factors of Production - Meaning and Features of Land, Labour and Capital, Types of Capital, Entrepreneur Qualities and functions. • Concept of Demand- Types of Demand- Determinants of market demand- Law of Demand-Elasticity of Demand- Income, Cross & Promotional- Consumer Surplus- Demand forecasting Meaning of Total Output. • Stock and Supply- Supply of Individual Seller and Market Supply Determinants of Market Supply and Law Supply.	**15**
II	**Classification of markets** • Forms of Market and Price Determination - Perfect • Competition - Price determination under perfect competition Monopoly- Meaning, Features and types Monopolistic Competition, Meaning and Features of Oligopoly. • Market strategy • Geographical distribution of market • WTO policies • Online marketing • Consumer psychology and behaviour	**15**

REFERENCES

24BUHS4T05

1.	Mankiw, N. G. Principles of Economics. Cengage.
2.	Samuelson & Nordhaus. Economics. McGraw Hill.
3.	Koutsoyiannis. Microeconomics. Macmillan.
4.	Lipsey. Introduction to Positive Economics. Oxford.

5.	Mishra & Puri. Indian Economy. Himalaya.
6.	RBI Publications.
7.	WTO Reports.

	INDIAN KNOWLEDGE SYSTEM	Credits 02
Course code 24BU4AEC07:	**Course title - Introduction to Archaeology & Economics**	**No of lectures in hrs 30**

COURSE OUTCOME

Students will be wanted to learn OR on completion of this course, students will be able to learn:

CO 1	Explain temple architecture	L2
CO 2	List different water management systems in ancient India	L1
CO 3	Summarize concept of barter system, national income, money, crypto-currency and dowry system	L2
CO 4	Explain the functions and challenges of economics and monetary systems in India	L2

Grading will be as 3: High(>60%), 2: Moderate(40%-60%), 1: Low(<40%), 0: No Mapping

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6
CO 1	0	0	0	0	0	3
CO 2	0	0	0	0	0	3
CO 3	0	0	0	0	0	3
CO 4	0	0	0	0	0	3

	Course: IKS	
Unit I	**Temple archaeology and water management system in ancient India**	**No. of Lectures**
I	**Temple architechture** • Origin and development of temples • Main features of temple architechture • Features of Nagara, Vesara, Dravida and Bhumija temples. **Water management system in ancient India** • Northern region • Southern region • Central Indian region • Irrigation methods in Indus valley civilization	**15**
II	**History & advances in economics** • Barter system: meaning, importance, advantages, disadvantages and types. • National income-meaning and definition, estimation of national income, difficulties.	**15**

	• Money- Meaning and Functions of Money, Supply of Money, Constituents of Money supply. Measures of Money Supply in India (including Liquidity Concepts). • Crypto currency • Dowry system	

REFERENCES	
24BU4AEC07	
1.	Basham, A. L. The Wonder That Was India. Rupa.
2.	Thapar, R. Early India. Penguin.
3.	Upinder Singh. History of Ancient India. Pearson.
4.	Altekar, A. S. State and Government in Ancient India.
5.	Kosambi, D. D. Ancient India. Vikas.
6.	Reddy, Y. V. Indian Monetary System.
7.	RBI Historical Publications.

	VSEC - VOCATIONAL & SKILL ENHANCEMENT COURSES	Credits 02
Course code 24BU4VSC04:	**Course title - Social Perception**	**No of lectures in hrs 45**

COURSE OUTCOME

Students will be wanted to learn OR on completion of this course, students will be able to learn:

CO 1	Explain core psychological concepts including attribution, impression formation, Pro social, antisocial behavior, interpersonal attraction and prejudice	L2
CO 2	Evaluate errors, biases and determinants influencing behavior	L4
CO 3	Apply psychological assessment tools, experimental task and observation methods to measure cognitive processes, stress, social support, aggression, locus of control, and prosocial behavior	L3
CO 4	Analyze behavioral data, case material to formulate hypothesis, identify variable and interpret social and cognitive phenomenon	L4

Grading will be as 3: High(>60%), 2: Moderate(40%-60%), 1: Low(<40%), 0: No Mapping						
	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**
CO 1	0	0	0	0	0	3
CO 2	0	0	0	0	0	3
CO 3	0	0	0	0	0	3
CO 4	0	0	0	0	0	3

	Course: VSEC	
Unit I	**Social Perception**	**No. of Lectures**
I	**Social Perception**: • Concept of Attribution • Theories of Attribution • Errors and Biases in Attribution • Impression Formation • Prosocial and Antisocial Behavior • Concept of Prosocial Behavior and related concepts • Bystander Effect • Determinants of Prosocial Behavior • Theories of Altruism • Antisocial Behavior • Interpersonal Attraction and close Relationship, Stereotyping, Prejudice, and Discrimination	**15**

VSEC Practical	
1.	Bystander effect case study.
2.	Perceived stress scale.
3.	Stroop test.
4.	Indian trail making test.
5.	Administration, scoring LOC.
6.	Case study on prosocial behavior.
7.	Orphanage/ Old age visit & make report on it.
8.	Reactive- Proactive Aggression test.
9.	Identification, hypothesis, design and variable.
10.	Multidimensional scale of perceived social support

REFERENCES

23BU4VSC04

1.	Baron & Byrne. Social Psychology. Pearson.
2.	Myers, D. Social Psychology. McGraw Hill.
3.	Aronson et al. Social Psychology. Pearson.
4.	Hogg & Vaughan. Social Psychology. Pearson.
5.	APA Manuals.
6.	NCERT Psychology.
7.	Singh, A. K. Social Psychology.

VPM's B.N. Bandodkar College of Science (Autonomous), Thane
Curriculum Structure for the Undergraduate Degree Programme S.Y.B.Sc Human Science

	SEMESTER – III	Course imparts Employability (EM), Entrepreneurship (EN), Skill Development (SD)			Course integrates with Professional Ethics (PE), Gender Equity (GE), Human Value (HV), Environmental Sustainability (ES)			
Course Code	**Major Course Title**	**EM**	**EN**	**SD**	**PE**	**GE**	**HV**	**ES**
24BUHS3T01	Haematology, Immunology & Epidemiology	--	--	--	√	--	√	√
24BUHS3T02	Nutrition & Lifestyle	√	--	√	--	--	√	--
24BUHS3P01	Practical based on 24BUHS3T01 & 24BUHS3T02	√	--	√	√	--	--	--
23BU3VSC06	Intelligence & Behaviour	√	--	√	--	--	√	--
	Minor Course Title							
24BUHS3T03	Health & Wellness	--	--	--	√	--	√	√
24BUHS3T04	Personality & Cognitive Psychology	--	--	--	--	--	√	--
24BUHS3P02	Practical based on 24BUHS3T03 & 24BUHS3T04	√	--	√	√	--	--	--
Course Code	**Generic - Course Title**							
24BUHS3T05	Management & Organization	√	√	√	√	--	--	--
Ability Enhancement Course Semester 3 -								
24BU3AEC06	Cyber Law & Shaping Leaders	√	--	√	√	--	√	--

Semester 3 - VSEC – Value Skill Enhancement Course								
24BU3VSC06	Intelligence & Behaviour	√	--	√	--	--	√	--
Semester 3 - Field Project								
24BUHS3P03	Field Project – I	√	--	√	√	--	√	√
16	***Total***	***06***	***01***	***06***	***05***	--	***05***	***03***

	SEMESTER – IV	**Course imparts Employability (EM), Entrepreneurship (EN), Skill Development (SD)**			**Course integrates with Professional Ethics (PE), Gender Equity (GE), Human Value (HV), Environmental Sustainability (ES)**			
Course Code	**Major Course Title**	**EM**	**EN**	**SD**	**PE**	**GE**	**HV**	**ES**
24BUHS4T01	Sex & Fertility	--	--	--	√	√	√	--
24BUHS4T02	Basics of Biotechnology	√	--	√	--	--	--	--
24BUHS4P01	Biotechnology Practical	√	--	√	√	--	--	--
	Minor Course Title							
24BUHS4T03	Environmental Studies	--	--	--	--	--	--	√
24BUHS4T04	Social Psychology & LGBTQ Community	--	--	--	√	√	√	--
24BUHS4P02	Environmental Practical	√	--	√	--	--	--	√
Course Code	**Generic - Course Title**							
24BUHS4T05	Introduction to Economics	√	--	--	--	--	--	--

VSEC – Value Skill Enhancement Course								
24BU4VSC04	Social Perception	--	--	--	--	√	√	--
Semester 4 - Indian Knowledge System								
24BU4AEC07	Archaeology & Economics	--	--	--	--	--	√	--
Field Project – II								
24BUHS4P03	Field Project – II	√	--	√	√	--	√	√
25	***Total***	**05**	**00**	**05**	**04**	**03**	**05**	**03**

Prof. Dr. Vinda Manjramkar
BOS Chairman & In charge of Department of Human Science