

Cross Cutting Issues
Department of Sanskrit

Subject Code	Course Title	Section	Issues
SKT- DSC-101	संस्कृत काव्य	C	Morality and Ethics, Justice and Equality in Society
SKT - DSC-103	नीति साहित्य	A,B,C	Truth and Integrity, Self-Discipline and Restraint, Human Nature
SKT-AECC-104	उपनिषद्, श्रीमद्भगवद्गीता तथा पाणिनीय शिक्षा	A,B,C,D	Duty, Wisdom, Detachment and balance
SKT-DSC- 201	संस्कृत नाटक	A,B,C,D	Gender Equality
SKT-SEC-205	आयुर्वेद के मूल सिद्धांत	A,B,C,D	Harmony and Nature, Environmental
SKT-DSE- 301	व्यक्तित्व विकास का भारतीय दृष्टिकोण	B,C,D	Morality and Ethics, Truth and Integrity, Self-Discipline and Restraint
SKT-GE-303	पातंजल योगसूत्र	A,B,C,D	Morality and Ethics
SKT-SEC-306	भारतीय वास्तुशास्त्र	A,B,C,D	Harmony and Balance

DEPARTMENT OF HOME SCIENCE
RKMV, SHIMLA

Department of Home science integrates cross cutting issues relevant to Gender, Environment, Human Values and Professional Ethics into the Curriculum

S.No	Name of the Programme	Name of the course provided by the Department of Home science which integrates cross cutting issues relevant to Gender, Environment and Sustainability, Human Values and Professional Ethics into the Curriculum	Course Code	Description
Courses relevant to Gender Issues				
1.	B.A Nutrition and Health Education	Nutrition for the Family	BANHE-A-102	Gender Issues The courses enable to identify physical changes in pregnancy and interpret it to the nutritional requirements also inculcates developmental change during adolescents and relate to the nutritional requirements
2.	B.A Nutrition and Health Education	Maternal and Child Nutrition	BANHE –A-303	Gender Issues This course relates the role of nutrition for the pregnant women, lactating mothers, breast feeding and complementary foods. And to enable us to know about child health, morbidity, maternal and child health programs.
3.	B.A Nutrition and Health Education	Public Nutrition	BANHE –A-301	Gender Issues The course interprets the measures of malnutrition and nutritional problems of the community.
4	B.A Nutrition and Health Education	Public Health Nutrition	BANHE-A-202	Gender Issues This course enables to identify and contribute to the prevention of public health/social health problems in the country. And to equip students with workable knowledge to treat common illnesses at home.
5.	B.A Home Science	Gender In Extension And Development	BA HSC /BSC HSC- 306:	Gender Issues This course inculcates the process of development with importance of gender-based programs and to

				understand the efforts at different levels for empowering women
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Courses relevant to Human Values and Professional Ethics				
6.	B.A Nutrition and Health Education	Introduction to Food Safety	BANHE -A-201	Human Values and Professional Ethics: This course creates awareness about the importance of food safety and related issues by discussing the various food handling practices.
7.	B.A Nutrition and Health Education	Human Nutrition	BANHE-A-305	Human Values and Professional Ethics: This course enables us to understand basic concepts in Nutrition, nutrients and their functions, sources and deficiency symptoms .and to understand the nutritional requirements during different stages of life.
8.	B.A Nutrition and Health Education	Home based Catering	BANHE-A-203	Human Values and Professional Ethics: Enhances knowledge on Business Ethics, Sustainability and Business environment domestically and globally. This course appries the students regarding Food service Industry, food production as well as standardization of a recipe and the various steps to set up one's own unit. Enhances knowledge on Business Ethics, Sustainability and Business environment domestically and globally.
9.	B.A Nutrition and Health Education	Nutrition and Fitness	BANHE -A-204	Human Values and Professional Ethics: This course helps in understanding the importance of fitness and its relation to health and nutrition
10.	B.A Nutrition and Health Education	Food and Nutrition	BANHE -A-304	Human Values and Professional Ethics: To understand the parameters of Body Mass Index and meal planning for different activity levels.
11.	B.A Nutrition and Health Education	Therapeutic Nutrition	BANHE-A-302	Professional Ethics: To enable students to gain practical knowledge on functioning of dietary department and dietary modification of various diseases. This course inculcates Role

				and responsibilities of Dietician and Code of ethics.
12.	B.A Nutrition and Health Education	Nutrition: Lifespan Approach	A BANHE –A-306	Human Values: To know about the principles, factors affecting meal planning, dietary guidelines, and methods of assessment of nutrient requirement. To inculcate interest in the students to know about the need for the nutrients in different stages of life span of human beings.
13.	B.A Home Science	Resource Management	BA HSC/BSC HSC- 102:	Human Values: To create awareness among the students about management in the family to recognize the importance of wise use of resources in order to achieve goals

Department of Physical Education
Cross Cutting Issues

Sr No	Course Title	Course Code	Class	Issues	Outcomes
1	Sports Training	PED204TH	B.A.2nd year	1. Health and Well-being	<ul style="list-style-type: none"> • Physical Health: Importance of physical activity for overall health, fitness, and body awareness. • Mental Health: Stress management, self-esteem building, and mindfulness through exercise. • Nutrition: Understanding the role of balanced diets and hydration in physical performance.
2	Introduction to Physical Education	PED101TH	B.A.1st year	2. Inclusion and Diversity	<ul style="list-style-type: none"> • Adapted PE: Designing activities for students with diverse physical abilities. • Cultural Awareness: Including sports and games from various cultures, promoting respect for diversity. • Gender Equality: Encouraging equal participation and breaking stereotypes in sports and activities.
3	Officiating and Coaching	PED308TH	B.A.3rd year	3. Ethics, Fair Play, Lifelong Learning and Skills	<ul style="list-style-type: none"> • Motor Skills Development: Enhancing coordination, balance, and motor control. • Teamwork and Collaboration: Emphasizing communication, cooperation, and respect in team sports. • Leadership and Decision-Making: Opportunities to develop leadership skills through coaching or leading activities. • Sportsmanship: Encouraging integrity, fairness, and respect for opponents. • Rules and Regulations: Understanding the role of rules in creating a safe and fair environment.

4	Sports Medicine, Physiotherapy and Rehabilitation	PED203TH	B.A.2nd year	4. Safety and Risk Management	<ul style="list-style-type: none"> • Personal Safety: Teaching the importance of using proper equipment, warm-up routines, and injury prevention techniques. • Environmental Awareness: Understanding outdoor safety, including weather conditions and terrain when participating in outdoor activities.
6	Methods of Teaching in Physical Education	PED307TH	B.A.3rd year	6. Technology in Sports and Sustainability and Environment	<ul style="list-style-type: none"> • Fitness Tracking: Using technology like heart rate monitors, pedometers, and apps to track fitness progress. • Performance Analysis: Introduction to video analysis and other tools used by athletes for skill improvement. • Green Sports: Encouraging eco-friendly sports practices, such as recycling equipment and using sustainable facilities. • Outdoor Education: Promoting activities like hiking, camping, and cycling, fostering a connection with nature
8	Recreation	PED305TH	B.A.3rd year	8. Citizenship and Social Responsibility	<ul style="list-style-type: none"> • Community Engagement: Encouraging participation in community sports and physical activities. • Volunteering: Opportunities for students to coach or assist in organizing sports events, fostering a sense of civic duty.

Dr Jitender Thalur
(Assistant Professor in Physical Education)

Department of Botany

A. Cross Cutting Topics (Global Importance)

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| 1. Biopiracy | BOTA 306 |
| 2. IPR & Traditional Knowledge | BOTA 306 |
| 3. Commercial Floriculture | BOTA 204 |
| 4. Organic Farming | BOTA203 |

B. Interdisciplinary Outreach

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| 1. Marketing of Mushrooms in India & Abroad & Cost benefit ratio. | BOTA 307 |
| (This topic is given to Deptt. Of Commerce) | |
| 2. Short term and long term storage and making papads
and pickles of Mushrooms. | BOTA 307 |
| (This topic is given to Deptt. Of Nutrition & Health) | |

Department of Chemistry

Cross Cutting topics

Their importance at Global level:

TOPICS	COURSE CODE
1. Causes of environmental pollution Awareness about sources responsible for water contamination	CHEM203
2. Conservation of Nature Adverse effects of pesticides	CHEM308
3. Green Chemistry Green chemistry for clean technology. Use of chemistry for pollution prevention by designing the chemical products and processes that reduce the use of generation of hazardous substances. Significance and industrial application of green chemistry.	CHEM307
4. Intellectual Property Rights Scope of IPR, copyrights, trademarks, industrial designs and patents	CHEM307

INTERDISCIPLINARY OUTREACH

COURSE CODE - CHEM307 SEC

Topics proposed by Deptt. of chemistry to Deptt. of commerce

1. Business basics and chemistry in industry
2. Intellectual Property Right

Department Of Chemistry
Proposal for Inter-Departmental Teaching Collaboration
Session 2024-25

To

The Head of Commerce Department,

R.K.M.V. Shimla, H.P.

Subject: Request for Interfaculty Exchange

In order to boost the learning experience of Chemistry students in business skills for chemistry, we kindly request you to nominate suitable faculty member for inter faculty collaboration and schedule a meeting to finalize the details.

Topics to be covered:

Key business concepts: Business plans, market need, project management and routes to market, Current challenges and opportunities for chemistry using industries, role of chemistry in India and global economics, Financial aspects of business , concept of intellectual property right and patents.

(As per time Table)

Benefits:

Help UG students develop the skills they need to pursue a career in business.

It will provide knowledge to students regarding license and infringement of patents and various financial aspects of business.

We look forward for a positive response from your side for a productive collaboration

H.O.D

Department of Chemistry

Department of Geography

Cross-Cutting Issues (Syllabus)

Environmental Issues

Course: Environmental Geography (GEOGP 202)

- ✓ Definition and Scope of Environmental Geography Meaning and Components of Environment Ecosystem – Concept, components and Functions
- ✓ Human-Environment Relationship Environmental Determinism and Possibilism, Biomes- Definition, Mountain and Desert Regions
- ✓ Environmental Problems: Air and water Pollution, Their Causes, Impacts and Management, Biodiversity Loss
- ✓ Environmental Management Initiatives in India Environmental Protection Act, 1982, Environmental Policy of India(2006), Chipko Movement

Course: Disaster Management (GEOGP 304-DSE-1)

- ✓ Definition and Concepts.: Hazards, Risk, Vulnerability and Disasters
- ✓ Causes, Impact, Distribution: Landslide, Earthquake, and Cyclone
- ✓ Causes, Impact, Distribution: Forest Fire, Road Accidents
- ✓ Mitigation and Preparedness, NDMA and NIDM Community Based Disaster Management Do's and Don'ts During Disasters

Course: Disaster Risk Reduction (GEOGP 305-GE-1)

- ✓ Hazards, Risk, Vulnerability and Disasters: Definition and Concept.
- ✓ Disasters in India: Causes, Impact and Distribution of Flood and Flash Flood, Earthquake and Cyclone
- ✓ Human Induced Disasters: Causes, Impact, Distribution and Mapping
- ✓ Disaster Risk Reduction: Mitigation and Preparedness NDMA and NIDM Community-Based Disaster Management Do's and Don'ts During Disasters

Sustainable Development

Course: Sustainability and Development (GEOGP 306-GE-2)

- ✓ Sustainability: Concept, Components
- ✓ The Millennium Development Goals: National Strategies and International Experiences Sustainable Development: Need and its realization in Indian context
- ✓ Inclusive Development: Education, Health Role of higher education in achieving sustainability Policies and Global Cooperation for Climate Change
- ✓ Sustainable Development Policies and Programmes: Rio+20, Financing for Sustainable Development; National Environmental Policy

RKMV

Deptt of Zoology

Curriculum topics addressing Cross-cutting issues such as Professional Ethics, Gender, Human Values, Environment and Sustainability are taught in college.

Program	Year	Cross-cutting issues	Course code/Title	Unit	Topic
B.Sc. Zoology	II	Gender/Human values	ZOOL202	5	Sex determination
B.Sc. Zoology	III		ZOOL 302 (C)	4	Reproductive Health
B.Sc. Zoology	II	Environment & Sustainability	ZOOL 204	1-6	Apiculture
B.Sc. Zoology	II		ZOOL-202	12	Extinction (Anthropocene Extinction)
B.Sc. Zoology	III		ZOOL-301(A)	6	Insects of Economic Importance

Rajesh Azad

HOD

Ms. Kavita Dhiman

RKMV
Department of Zoology
Interfaculty Exchange program

Program	Year	Interfaculty Exchange	Course code/Title	Common Topics
B.Sc. Zoology	II	Physical education	ZOOL201	Muscle Physiology/anatomy, Cardiovascular system, Digestion physiology
B.Sc. Zoology	III	Geography	ZOOL 301 (A)	Animal Husbandry, Poultry Farming, Fishery,
B.Sc. Zoology	II		ZOOL 203 & 204	Sericulture, Apiculture
B.Sc. Zoology	II	Physics	ZOOL 203	X-ray, CT scan, MRI and PET
B.Sc. Zoology	II	Chemistry	ZOOL-201	Biomolecules, Carbohydrates, Proteins and Lipids

Rajesh Azad

HOD

Ms. Kavita Dhiman

Sociology Syllabus

BA- 3 rd Year

Discipline Specific Electives DSE- 2A Option- 2

Course: Gender and Sexuality

Code: SOCL-A 306

Course Contents

Course Objective: This course aims to introduce students to a basic understanding of gender by interrogating the categories of gender, sex and sexuality. The complexity of gender relations in contemporary societies are further explored by looking in the areas of work and family.

Units	Topics
I	Gendering Sociology: (i) Sociology of Gender; Gender as a Social Construct (ii) Gender and Sex; Gender Roles
II	Gender Differences and Inequalities: (i) Concept of Gender Inequality; Gender based Division of Labour (ii) Gender and Caste; Gender and Class
III	Gender Discrimination: (i) Meaning, Causes and Consequences (ii) Remedial Measures for Removing Gender Discrimination
IV	Gender Equality: (i) Constitutional Provisions for Women; Quest for Gender Equality (ii) Women Empowerment: Meaning, Policies and Programmes for Women Empowerment; Women Movements

Year	Course Code	Course Type	Course Name	Cross-Cutting Issues
BSc First Year	BIOTECH1C01	Core Course	Biochemistry & Metabolism	The course aims to provide students with a basic understanding of the molecular architecture of eukaryotic cells and organelles, including membrane structure and dynamics; the principles of bioenergetics and enzyme catalysis; the chemical nature of biological macromolecules, their three-dimensional construction, and the principles of molecular recognition
BSc First Year	BIOTECH1C02TH PR	Core Course	General Microbiology	The objective of the subject is to equip the students to gain knowledge about prokaryotic and eukaryotic cellular processes, interaction of microorganisms among themselves, with physical and chemical agents and higher order organisms in environment and biological systems to various conditions.
BSc First Year	BIOTECH1C03TH PR	Core Course	Genetics	The goal of this course to understand the inheritance pattern, linkages and population genetics with excellent examples
BSc First Year	BIOTECH1C04TH PR	Core Course	Molecular Biology	Introduce the student into the world of Molecular Biology, to understand the transfer of genetic information from nucleic acid till protein synthesis and cell function and to help the student to

Year	Course Code	Course Type	Course Name	Cross-Cutting Issues
				know the general structure, organization and function of eukaryotic cells.
BSc First Year	GE-1 MICRO1GE01	Generic Elective	Cell Biology	The course will provide an overview of cells, their origin and evolution. How they work in healthy and diseased state. Molecular composition of cytoplasm and better understanding how living things live.
BSc First Year	GE-2 CHEM GE 103	Generic Elective	Chemistry-1	
BSc First Year	ENVS1AECC02	Ability Enhancement Compulsory Course (AEC)	Environment Science	The goal of environmental education is to develop a world population that is aware of, and concerned about, the environment and its associated problems, and which has the knowledge, skills, attitudes, motivations, and commitment to work individually and collectively towards solutions of current problems .
BSc Second Year	BIOTECH2C05	Core Course	Immunology	This course explores immunology, how the body defends itself from constant assault by parasites and pathogens. This course will present the fundamentals of both innate and adaptive immunity, emphasizing functional interactions among cells and organs. We will cover signaling, pathogen recognition and the division of labor among

Year	Course Code	Course Type	Course Name	Cross-Cutting Issues
				myeloid, lymphoid and supporting cells.
BSc Second Year	BIOTECH2C06	Core Course	Bioprocess Technology	The course will introduce the students to bioprocess technology and will impart knowledge about use of microorganisms for generating various useful products using bioprocess technology, use of bioreactors and their process parameters
BSc Second Year	BIOTECH2C07TH PR	Core Course	Recombinant DNA Technology	To familiarize the student with emerging field of biotechnology i.e. Recombinant DNA Technology as well as to create understanding in wet lab techniques in genetic techniques.
BSc Second Year	BIOTECH2C08TH BIOTECH2C08PR	Core Course	Environmental Biotechnology	The main objective of the subject is to impart an understanding about the use of microorganisms to solve environmental problems and taxonomic, ecological and genetic relationship among microorganisms.
BSc Second Year	BIOTECH2C09 TH BIOTECH2C09PR	Core Course	Bacteriology and virology	The thrust of this course is to make aware students with basics of bacteriology and virology by providing knowledge of bacterial viral structure growth replication and nutrition characteristics.
BSc Second Year	BIOTECH2C10TH BIOTECH2C10PR	Core Course	Microbial Physiology	The course will provide the information about growth and metabolism of

Year	Course Code	Course Type	Course Name	Cross-Cutting Issues
				microorganisms, microbial relationship. Relationship between metabolism and energy source
BSc Second Year	GE-3 MICRO2GE02TH MICRO2GE02PR	Generic Elective	Bio Analytical Tools	To develop the skills of the application of basic and advanced techniques employed in quantitative and qualitative analysis of biomolecules.
BSc Second Year	GE-4 CHEM GE 205	Generic Elective	Chemistry-2	
BSc Second Year	BIOTECH2SEC01 TH BIOTECH2SEC01 PR	Skill Enhancement Elective Course (SEC)	Enzymology	The major objective is to help students know the structure and properties of macromolecules that interact to maintain and perpetuate the living systems.
BSc Second Year	BIOTECH2SEC04 TH BIOTECH2SEC04 PR	Skill Enhancement Elective Course (SEC)	Industrial Fermentations	To provide the knowledge of basic principle of fermentation process, which will help students to design, develop and operate industrial level fermentation process.
BSc Third Year	BIOTECH3C11TH BIOTECH3C11PR	Core Course	Animal Biotechnology	This course helps students to understand use of biotechnology techniques in animal welfare including human by providing knowledge of transgenic animals gene therapy and assistive reproductive techniques.

Year	Course Code	Course Type	Course Name	Cross-Cutting Issues
BSc Third Year	BIOTECH3C12 TH BIOTECH3C12 PR	Core Course	Plant Biotechnology	To impart understanding of the basic principles of the plant sciences and molecular biology, as well as the integration of these disciplines, to provide healthy plants in a safe environment for food, non-food, feed and health applications.
BSc Third Year	BIOTECH3C13TH BIOTECH3C13PR	Core Course	Medical Microbiology Medical	The subject equips students with the knowledge of diagnosing and treating diseases caused by bacteria, fungi and parasites.
BSc Third Year	BIOTECH3C13TH BIOTECH3C13PR	Core Course	Medical Microbiology Medical	The subject equips students with the knowledge of diagnosing and treating diseases caused by bacteria, fungi and parasites.
BSc Third Year	BIOTECH3C14 TH BIOTECH3C14 PR	Core Course	Food Biotechnology	The objective of the subject is to provide learning and to develop professional skills for planning and coordinating activities in specifically, the innovative technologies applied to food production and control of food quality and safety.
BSc Third Year	BIOTECH3DSE01	Discipline Specific Elective (DSE)	Biochemical Engineering	To apply the chemical engineering principles in biological systems. Introduction to Biochemical Engineering: Comparative study of chemical and biochemical processes, Basic concepts of microbiology.

Year	Course Code	Course Type	Course Name	Cross-Cutting Issues
BSc Third Year	BIOTECH3DSE02	Discipline Specific Elective (DSE)	Advances in Microbiology	The goal of this subject is to provide a platform to promote, share, and discuss various new issues and developments in different areas of Microbiology.
BSc Third Year	BIOTECH3DSE03	Discipline Specific Elective (DSE)	Ecology and Environment Management	To broaden their ecological knowledge in subjects such as energy, landscapes, air, water, natural resources and wildlife.
BSc Third Year	BIOTECH3DSE06	Discipline Specific Elective (DSE)	Molecular Diagnostics	To develop the skills of the application of basic and advanced techniques employed in quantitative and qualitative analysis of biomolecules.

Year	Course Code	Course Type	Course Name	Cross-Cutting Issues
BSc First Year	MICRO1C01TH MICRO1C01PR	Core Course	Introduction to Microbiology & Microbial Diversity	The subject will provide detailed information about growth and metabolism of microorganisms, microbial relationship. Relationship between metabolism and energy source. Diversity among microorganisms and their interaction among themselves.
BSc First Year	MICRO1C02TH MICRO1C02PR	Core Course	Bacteriology	The course provide basic knowledge of bacteria with special consideration to their growth,replication , classification and culturing techniques.
BSc First Year	MICRO1C03TH MICRO1C03PR	Core Course	Biochemistry	The course aims to provide students with a basic understanding of the molecular architecture of eukaryotic cells and organelles, including membrane structure and dynamics; the principles of bioenergetics and enzyme catalysis; the chemical nature of biological macromolecules, their three-dimensional construction, and the principles of molecular recognition.
BSc First Year	MICRO1C04TH MICRO1C04PR	Core Course	Virology	Through this course students will be able to understand the nature ,structure replication, and infection cycle of viruses.

Year	Course Code	Course Type	Course Name	Cross-Cutting Issues
BSc First Year	GE-1 BIOTECH1GE01TH BIOTECH1GE01PR	Generic Elective	Mycology and Phycology	The course aims to provide students with knowledge and understanding of the nature, structure, replication, and infection cycle of algae and fungi
BSc First Year	GE-2 BIOTECH1GE02TH BIOTECH1GE02PR	Generic Elective	Cell Biology	The course will provide an overview of cells, their origin and evolution. How they work in healthy and diseased state. Molecular composition of cytoplasm and better understanding how living things live.
BSc First Year	ENGL103	Ability Enhancement Compulsory Course (AEC)	English Communication	
BSc Second Year	ENVS1AECC02	Ability Enhancement Compulsory Course (AEC)	Environment Science	The goal is to develop a population that is aware of, and concerned about, the environment and its associated problems, and which has the knowledge, skills, attitudes, motivations, and commitment
BSc Second Year	MICRO2C05TH MICRO2C05PR	Core Course	Microbial physiology & Metabolism	The course will provide the information about growth and metabolism of microorganisms, microbial relationship. Relationship between metabolism and energy source

Year	Course Code	Course Type	Course Name	Cross-Cutting Issues
BSc Second Year	BIOTECH2C07TH PRMICRO2C06TH MICRO2C06PR	Core Course	Environmental Microbiology	The main objective of the subject is to impart an understanding about the use of microorganisms to solve environmental problems and taxonomic, ecological and genetic relationship.
BSc Second Year	MICRO2C07TH MICRO2C07PR	Core Course	Recombinant DNA Technology	To familiarize the student with emerging field of biotechnology i.e. Recombinant DNA Technology as well as to create understanding in wet lab techniques in genetic techniques.
BSc Second Year	MICRO2C08TH MICRO2C08PR	Core Course	Industrial Microbiology	The aim of the course is to give the students broad theoretical and practical skills in industrial microbiology. To discuss the role of microorganisms in industry, as well as to carry out experiments to produce microbial metabolites.
BSc Second Year	MICRO2C09TH MICRO2C09PR	Core Course	Microbes in Sustainable Agriculture and Development	This course provides insight of how microorganisms can be used in agricultural fields and to increase the crop yield by using bio fertilizers and bioinsecticides.
BSc Second Year	MICRO2C10TH MICRO2C10PR	Core Course	Molecular Diagnostics	To develop the skills of the application of basic and advanced techniques employed in quantitative

Year	Course Code	Course Type	Course Name	Cross-Cutting Issues
				and qualitative analysis of biomolecules.
BSc Second Year	GE-3 BIOTECH2GE3 TH BIOTECH2GE3 PR	Generic Elective	Molecular Biology	Introduce the student into the world of Molecular Biology, to understand the transfer of genetic information from nucleic acid till protein synthesis and cell function and to help the student to know the general structure, organization and function of eukaryotic cells.
BSc Second Year	GE-4 BIOTECH2GE04TH BIOTECH2GE04PR	Generic Elective	Immunology	This course explores immunology, how the body defends itself from constant assault by parasites and pathogens. This course will present the fundamentals of both innate and adaptive immunity, emphasizing functional interactions among cells and organs. We will cover signaling, pathogen recognition and the division of labor among myeloid, lymphoid and supporting cells.
BSc Second Year	MICRO2SEC03	Skill Enhancement Elective Course (SEC)	Biofertilizers and Biopesticides	The subject will provide the basic knowledge about biofertilizers. Type of microbes constitute potential biofertilizer candidates (nitrogen fixers, phosphate solubilizers, plant growth hormone producers, siderophore etc .

Year	Course Code	Course Type	Course Name	Cross-Cutting Issues
BSc Second Year	MICRO2SEC05	Core Course	Management of Human Microbial Diseases	This course Emphasis is placed on the study of infectious diseases of humans, other animals and plants. Topics covered include: introduction to microorganisms and their environment, microbial structure and function; microbial molecular biology and genetics; bacterial viruses; structure; an introduction to pathogen-host interactions; new and emerging pathogens of humans and other animals; infectious disease and mechanisms by which microbial pathogens interact with animals and plants; biotechnological applications of bacteria.
BSc Third Year	MICRO3C11TH MICRO3C11PR	Core Course	Food and Dairy Microbiology	The Food and dairy Microbiology Short course provides insight into the most recent developments of food-borne pathogens, toxins, and contaminants that may occur in a food plant environment. The short course is delivered in classroom and laboratory environments and includes a mixture of theory, demonstrations, and practical sessions on the fundamentals of food

Year	Course Code	Course Type	Course Name	Cross-Cutting Issues
				microbiology and food safety.
BSc Third Year	MICRO3C12TH MICRO3C12PR	Core Course	Medical Microbiology Medical	The subject equips students with the knowledge of diagnosing and treating diseases caused by bacteria, fungi and parasites.
BSc Third Year	MICRO3C13TH MICRO3C13PR	Core Course	Bioprocess Technology	The course will introduce the students to bioprocess technology and will impart knowledge about use of microorganisms for generating various useful products using bioprocess technology, use of bioreactors and their process parameters.
BSc Third Year	MICRO3C14TH MICRO3C14PR	Core Course	Instrumentation & Biotechniques	To develop the skills of the application of basic and advanced techniques employed in quantitative and qualitative analysis of biomolecules.
BSc Third Year	MICRO3DSE01	Skill Enhancement Elective Course (SEC)	Biochemical Engineering	To apply the chemical engineering principles in biological systems. Introduction to Biochemical Engineering: Comparative study of chemical and biochemical processes, Basic concepts of microbiology
BSc Third Year	MICRO3DSE03	Skill Enhancement Elective Course (SEC)	Ecology and Environment Management	To broaden their ecological knowledge in subjects such as energy, landscapes, air, water,

Year	Course Code	Course Type	Course Name	Cross-Cutting Issues
				natural resources and wildlife.
BSc Third Year	MICRO3DSE04	Skill Enhancement Elective Course (SEC)	Parasitology	Medical parasitology traditionally has included the study of three major groups of animals: parasitic protozoa, parasitic helminthes (worms), and those arthropods that directly cause disease or act as vectors of various pathogens.
BSc Third Year	MICRO3DSE06	Skill Enhancement Elective Course (SEC)	Advances in Microbiology	The goal of this subject is to provide a platform to promote, share, and discuss various new issues and developments in different areas of Microbiology.

Department of History
Cross-Cutting Issues/ Topics
Session: 2023-24

Following are the Course Names and Paper Code :

1. Historical Tourism (SEC) HIST 213

(A) Heritage

1. Tangible & Intangible Heritage
2. Historical Tourism

2. Indian History and Culture (SEC) HIST 317

(B) Social Differentiation

1. Feminism
2. Gender study
3. Issues of Violence,
4. Employment Issues

3. Modern and Contemporary World History (DSE-II) HIST 307

(C) Human Rights: A Historical Overview

1. Human Rights & its Classification; Civil, Political, Economic & Cultural
2. United Nation Human Right Commission
3. Amnesty International

4. Modern and Contemporary World History (DSE-II) HIST 307

(D) Ecological Movement: A Historical Overview

1. Concept of Human & Environment
2. Climate Change
3. Need of Environment Conservation and Measures

Department of Political Science (RKMV Shimla)

Cross-cutting Issues (Syllabus)

Human Rights

Course: Human Rights, Gender and Environment

- Human Rights: Meanings and Scope. UN Declarations and Conventions
- Human Rights in India: Constitutional Provisions and Practices.
- The Role of National Human Rights Commission(**NHRC**)

Gender

Course: Indian Government and Politics, Human Rights, Gender and Environment and Democratic awareness through legal literacy.

- Structures of Patriarchy . Economic Development and Women.
- The Issue of Women's Political Participation and Representation in India.
- Dowry, Domestic violence and crimes against women .

Social Inclusion

**Course: Indian Government and Politics ,
Democracy and Governance**

- Dynamics of Civil Society: New Social Movements
- Social movements: Peasants and workers movements in India

Environmental issues

Course: Human Rights, Gender and Environment.

- Environment and Sustainable Development.
- UN Environment Programme: Rio, Johannesburg and after
- Environmental Policy in India

Department of English

Cross-cutting Issues

Course Name and Paper Code

- 1) English-1, Core English(Compulsory) ENG CE 101**
 - Advocate human values of compassion, love and generosity, gender equality, women voice, awareness and kinship with nature
- 2) DSC-1A English Literature-I (Essays, Stories and Poems)ENG DSC 102**
 - Pain of Marginalized, women empowerment, necessity of environment conservation and preservation.
- 3) DSC-1B English Literature-2 (Poems, Short-Stories and Essays)ENG DSC 103**
 - Women voice and expression
- 4) English-2,Core English (Compulsory) ENG CE 201**
 - Poverty free world, Economic equity in gender, women education and empowerment, climate change and Environment sustainability.
- 5) DSC-1D, Literary Cross Currents ENG DSC 203**
 - Environment sustainability, gender issues.
- 6) DSE-1A, Soft Skills ENG DSE 303**
 - Promotes values of empathy, social and cultural sensitivity, emotional intelligence, and adaptability in human values.
- 7) GE-2, Contemporary India:Women and Empowerment , ENG GE 306**
 - Gender roles,Women Empowerment, Sexuality,Domestic Violence,Environment sustainability, Patriarchy, Cultural awareness.

Department of Environment Science

Cross Cutting Issues

ABILITY ENHANCEMENT COMPULSORY COURSE

Course Name: **ENVIRONMENT SCIENCE**

COURSE code : **ENVS2AECC02**

Environmental Conservation and Ecosystem Protection

- Introduction to environmental studies.
- Ecosystems: Multidisciplinary nature of environmental studies.
- Scope and importance.
- Structure and function of ecosystem.
- Energy flow in an ecosystem, food chains, food webs.
- Ecological succession, Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems.
- Levels of biological diversity: genetic, species, and ecosystem diversity.
- Biogeographic zones of India.
- Biodiversity patterns and global biodiversity hotspots.
- India as a mega-biodiversity nation.
- Endangered and endemic species of India.
- Threats to biodiversity, Habitat loss, Biological invasion.
- Conservation of biodiversity.
- In-situ and Ex-situ conservation of biodiversity.

- Concept of sustainability and sustainable development.

Natural Resource Management and Conservation

- Natural Resources and its management and conservation.
- Land resources and land use change.
- Land degradation, soil erosion, and desertification.
- Deforestation: Causes and impacts.
- Water: Use and over-exploitation of surface and groundwater.
- Floods, droughts.
- Conflicts over water (international & inter-state).
- Energy resources: Renewable and non-renewable energy sources.
- Use of alternative energy sources.
- Growing energy needs, case studies.

Global Issues and Environmental Policies

- Environmental Pollution and Management.
- Environmental pollution: types, causes, effects, and controls.
- Air, water, soil, and noise pollution.
- Solid waste management: Control measures of Urban and Industrial waste.
- Climate change, global warming, ozone layer depletion.
- Acid rain and impacts on human communities and agriculture.
- Environment Laws: Environment Protection Act.
- Air (Prevention & Control of Pollution) Act.
- Water (Prevention and control of Pollution) Act.
- Wildlife Protection Act, Forest Conservation Act.

- International agreements: Montreal and Kyoto protocols.
- Convention on Biological Diversity (CBD).

Social and Human Rights Issues

- Nature reserves, tribal populations, and rights.
- Human wildlife conflicts in Indian context.
- Human population growth and its impacts on environment, human health, and welfare.
- Resettlement and rehabilitation of project-affected persons; case studies.
- Disaster management: floods, earthquakes, cyclones, and landslides.
- Environmental movements: Chipko, Silent Valley, Bishnoi's of Rajasthan.

Environmental Ethics

- Environmental ethics in environmental conservation.

Social Intrusions and Health Concerns

- Dangers and ill effects of Drug Consumption.
- Introduction - Definition of addiction.
- Addict and Mode of action of drugs on body organs.
- Types of Drugs, Examples and their harmful effects.
- Reasons for drug addiction.
- Ill effects of drug addiction.
- Rehabilitation of Drug Addicts.

DEPARTMENT OF RETAIL MANAGEMENT (B.VOC.)

Cross Cutting Issues (Syllabus)

GENDER

COURSE: *Business Communication and Personality Development*

1. **Gender-Neutral Communication:** Encouraging the use of language that does not perpetuate gender stereotypes or biases, ensuring inclusivity and respect for all gender identities.
2. **Addressing Gender Bias:** Training students to recognise and challenge gender biases in communication, both in the workplace and during interpersonal interactions, to create more equitable professional environments.
3. **Empowering Women in Communication:** Fostering confidence in female students to effectively communicate in traditionally male-dominated fields, promoting equal participation in discussions, leadership, and decision-making roles.
4. **Inclusive Personality Development:** Ensuring that personality development courses are free from gendered expectations (e.g., assertiveness for men, politeness for women), promoting the development of well-rounded personalities based on individual strengths rather than gender norms.

COURSE: *Team Leadership*

1. **Gender Equality in Leadership Roles:** Promoting equal opportunities for all genders in leadership positions, ensuring that women, men, and non-binary individuals can equally aspire to and attain leadership roles.
2. **Eliminating Gender Bias:** Addressing unconscious biases in decision-making, task delegation, and performance evaluation to ensure fair treatment of all team members, regardless of gender.

3. **Encouraging Female Leadership:** Implementing mentorship and support programs for women in leadership roles, fostering a workplace where gender diversity in leadership is normalised.

COURSE: *Customer Service and Sales*

1. **Gender-Inclusive Customer Service:** Ensuring that all customers, regardless of gender, receive equal and respectful treatment. Training staff to avoid gender biases in interactions and provide tailored services that meet the diverse needs of all genders.
2. **Gender Sensitivity in Marketing:** Sales promotions and advertising should reflect diversity and inclusivity, avoiding reinforcing traditional gender roles. Marketing materials should appeal to a broad audience without stereotyping gender.

COURSE: *Human Resource Management*

1. **Gender-Sensitive Recruitment:** Ensuring gender-neutral job advertisements, fair recruitment processes, and no discrimination during hiring to create a gender-balanced workforce.
2. **Equal Pay and Career Advancement:** Enforcing policies that guarantee equal pay for equal work, providing all employees with equal opportunities for promotions, training, and career development, regardless of gender.
3. **Workplace Harassment and Safety:** Implementing strong policies against gender-based harassment and ensuring a safe and supportive environment for all genders at the workplace.
4. **Work-Life Balance and Parental Support:** Providing gender-sensitive work policies such as flexible work hours, maternity/paternity leave, and support for parents to help create an inclusive and supportive work environment for all employees.

ENVIRONMENT SUSTAINABILITY

COURSES: *Product Display, Visual Merchandising, and Health & Safety; Managing Inventory and Marketing; and Retail Environment*

1. **Energy Efficiency:** Incorporating energy-efficient lighting and display technologies to minimise the carbon footprint of visual merchandising.
2. **Eco-friendly Materials:** Utilising eco-friendly materials for displays and promoting sustainable product choices.
3. **Energy Efficiency in Store Design:** Designing retail environments that support sustainability, from energy-efficient store layouts to waste management systems.

COURSE: *Stores Operation & Supply Chain Management*

1. **Green Transportation:** Promoting sustainable logistics and transportation solutions in supply chain management, such as optimising routes, using fuel-efficient vehicles, or partnering with companies that use renewable energy for shipping.
 2. **Waste Reduction:** Teaching students to manage store operations in a way that minimises environmental impact.
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HUMAN VALUES

COURSE: *Work Management and Effective Communication*

1. **Respect and Empathy:** Fostering respect, empathy, and collaboration within diverse teams.
 2. **Promoting transparency, active listening, and conflict resolution** in the workplace.
 3. **Inclusivity:** Promoting an inclusive work environment where communication respects cultural, gender, and individual differences, ensuring that everyone feels valued and heard.
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PROFESSIONAL ETHICS

COURSE: *Customer Service and Sales; Process Compliance, Safety, and Security*

1. **Honesty in Sales:** Maintaining honesty in sales practices, avoiding deceptive advertising, and prioritising customer satisfaction.

2. **Respect for Privacy:** Protecting customer data and respecting their privacy, especially when handling sensitive information like payment details or personal preferences.
3. **Customer Welfare:** Prioritising the well-being of the customer, ensuring products or services offered are safe, and not promoting harmful products just for the sake of sales.

COURSE: *Marketing Management*

1. **Cultural Sensitivity:** Marketing campaigns should be respectful of cultural differences and avoid stereotypes, gender biases, or offensive content, ensuring that the messaging is inclusive and ethical.
 2. **Sustainability and Social Responsibility:** Ethical marketing should promote environmentally friendly products and practices, and highlight corporate social responsibility (CSR) initiatives, ensuring that these claims are genuine and not just for image-building.
 3. **Truth in Advertising:** Marketing strategies should be based on honest representation of products or services. Misleading or exaggerated claims can damage consumer trust and violate ethical standards.
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