

**Bharatiya Jain Sanghatana's ASC College Wagholi, Pune**

**Department of Commerce**

**Cross Cutting issues in University Syllabus**

<b>Subject/Paper</b>	<b>Class/ Paper No.</b>	<b>Cross-cutting Issues</b>
<b>Value Education</b> Values for excellence in life : Developing Values, Personal Values, Family Values, Professional Values. Life Skills : Motivational Skills, Communication Skills, Life style modification, Accessibility and Addiction, Environmental Awareness. Spiritual Education : Different schools of meditation, exploring the self, universal concept of the supreme, changing the belief system, Self Esteem, Stress free living.	F.Y.B.Com	Motivational And Communication Skills
<b>Employability Skill Enhancement Programme</b> Basic Communication Skills , Reasoning Ability ,Verbal Ability ,Personal Grooming ,Personality Development , CV Writing Skills ,Interview Techniques	F.Y.B.Com	Soft Skills
<b>Environmental Awareness</b> Concepts and scope of Environmental studies, Natural Resources, Ecosystem, Biodiversity and its conservation, Environmental Pollution, social issues and the environment, Human population & Environment	S.Y. B. Com	Environmental Pollution
<b>Human Rights</b> Human Values, Human Rights & Duties, social status of women & children in international & National perspective, status of social & economically disadvantaged people, human rights of vulnerable group	M. Com	Social status of women and children, Human Rights
<b>Cyber Security</b> Information security concept, security threats, security laws & standards, Security for VPN (virtual private network)& next generation technology	M. Com	Safety and security

Department of Hindi

Sr No	Class	Subject	Topic	Crosscutting Issues
1	F.Y.B.A.	Hindi	एक टोकरी भर मिट्टी - माधवराव सप्रे	Human values
2	F.Y.B.A.	Hindi	ईदगाह- प्रेमचंद	Human Values
3	F.Y.B.A.	Hindi	जुही की कली-निराला	Human Values
4	F.Y.B.A.	Hindi	उतनी दूर मत ब्याहना बाबा -निर्मला पुतुल	Gender equality
5	S.Y.B.A.	Hindi	नाच- अजेय	Human values
6	S.Y.B.A.	Hindi	देश कागज पर बना नक्शा नहीं होता -सर्वेश्वरदयाल सक्सेना	Human Values
7	S.Y.B.A.	Hindi	कितनी रोटी -अशोक चक्रधर	Human Values
8	T.Y.B.A.	Hindi	प्रेमचंद: एक संस्मरण -महादेवी वर्मा	Human values
9	T.Y.B.A	Hindi	रजिया -रामवृक्ष बेनीपुरी	Human Values
10	T.Y.B.A	Hindi	त्यागमूर्ति निराला - शिवपूजन सहाय	Human Values

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### Department of Marathi:

Class	Professional Ethics	Gender	Human Values	Environment and Sustainability
FYBA	--	--	समकालीन मराठी कथा - १.जेव्हा मी जात चोरली होती. २.बाजा - उपाकिरण अत्राम	--
FYBCom	उत्कर्षवाटा (क्रमिक पुस्तक) १.बिबिजीची यशोगाथा -सचिन चोभे २.प्रभावशाली कार्पोरेट महिला - नैना लाल किदवई	--	--	--
SYBA	--	--	--	साहित्यरंग (क्रमिक पुस्तक) १.अरणी - मारुती चित्तमपल्ली
TYBA	--	--	--	--

### Department of History

Sr.No	Class	Subject	Topic	Crosscutting Issues
1	SYBA	HISTORY	Religious Reforms Movement Society: Cast system and Position of Women	Gender equality Gender equality
2	TYBA	HISTORY	Mass Movement Subaltern Movement	Gender equality Human Values

### Department of Geography

Sr No	Sr No	Class	cross-cutting issues relevant with Environment
1	Geography	TYBA	Complete understanding of the ecosystems, the changes in environment, natural resources, Conservation, Pollution, Environment Protection, global warming, depletion of ozone layer and loss of biodiversity etc. are included in the syllabus to make the students fully aware about the environmental issues.

Department of Chemistry

Sr. No.	Class	Course	Page No.	Year of Implantation_ CBCS 2019 pattern	Crosscutting issue addressed ( Chemistry)
1	F.Y.B.Sc	CH-103	8,9	2019	Environment and sustainability
		CH-203	15,16		
2	S.Y.B.Sc	CH-303	14,16,17,18,19	2020	Environment and sustainability and Human values
3	T.Y.B.Sc	CH-505	4,16,19	2021	Environment and sustainability and Human values, professional issues
		CH-509	25,26		
		CH-511(A)	31,32,		
		CH-605	48,50,61		
4	M.Sc. I	CHP-227	30,31	2019	Environment and sustainability
5	M.Sc. II	CHO-453 (Sec.III)	31,42,44	2020	Environment and sustainability and professional issues



### 3. BBA(CA) (Semester III) 301: Digital Marketing

**Objectives:** The aim of this syllabus is to give knowledge about using digital marketing in and as business.

- |   |   |
|---|---|
| 1 | <b>E-Commerce</b><br>1.1 Introduction 1.2 Understanding Internet Marketing 1.3 Search Engine Optimization 1.4 Search Engine Marketing 1.5 Email Marketing 1.6 Digital Display Marketing |
|---|---|

### 4. BBA(CA) (Semester III) 307: Basic Course in Environmental Awareness

**Objective:** 1) To provide an opportunities to acquire the knowledge, values, attitudes, commitment, and skills needed to protect and improve the environment 2) To develop conscious towards a cleaner and better managed environment

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|---|--|
| 1 | <b>Introduction - Environmental studies</b> Definition, scope importance and need for public awareness. (Multidisciplinary nature of environmental studies)  |
| 2 | <b>Environmental Pollution -Definition, Causes, effects on human, water, soil, air (Mother Earth)</b> Air pollution Water pollution Soil pollution Marine pollution Noise pollution Thermal pollution Nuclear hazards  |
| 3 | <b>Various Government initiatives for conservation of Environment. Controlling measures)</b> Solid waste Management: Causes, effects and control measures of urban and industrial wastes. Role of an individual in prevention of pollution. Pollution case studies. Disaster management: floods, earthquake, cyclone and landslides. |

### Department of Statistics

Sr.No	Class	Subject	Topic	Crosscutting Issues
1	F Y B.Sc.	Statistics	Scope of Statistics: In the field of Industry, Biological sciences, Medical sciences, Economics, Social Sciences, Management sciences, Agriculture, Insurance, Information technology, Education and Psychology.	Professional Ethics  Environment and Sustainability into the Curriculum

### Department of BBA

<b>1. BBA(CA) (Semester VI) 603 : Recent Trends in IT</b>	
<b>Objectives: To study Eco friendly software development.</b>	
1	<b>Network Security</b> Cryptography: Introduction to Cryptography, Substitution Ciphers, Transposition Ciphers, One-Time Pads, Two Fundamental Cryptographic Principles; Symmetric Key Algorithms; DES-The Data Encryption Standards, AES – The Advances Encryption Standard; Public Key algorithms; RSA, Other Public Key algorithms; Digital Signatures, Symmetric-Key Signature, Public key Signature, Message Digests
	<b>Computing and Informatics</b> Introduction to computing, Types of computing: Cloud, Green, Soft, Mobile, Case Study
<b>2. BBA(CA) (Semester IV) 403: Computer Networking</b>	
<b>Objectives: To know about computer network To Provide Network Security and Standard</b>	
1	<b>Network Security Devices</b> Firewalls Packet-Filter firewall Proxy Firewall

**Department of Botany**

Sr. No	Subject/Paper	Cross cutting Issues	Values
1	BO 111 -Paper I - Plant Life and Utilization	Life cycle of plants, propagation, utilization of various group of plants	Human value
2	BO 112 Plant morphology and Anatomy	Variation, symmetry in external and Internal morphology of plants	Human value
3	BO 121 Plant life and utilization II	Life cycle of plants, propagation, utilization of various group of plants	Human value
4	BO 122- Paper II- Principles of Plant Science	Plant physiology- Relation of agriculture plants with environment factors Use of Molecular biology in production of GMO plants	Environment and sustainability
7	BO 231 Taxonomy of Angiosperms and Plant Ecology	Systematic study of plants and study of biotic and abiotic factors interaction	Human value
8	BO 232 Paper II- Plant Physiology	Study of factors affecting on plants and human economic progress	Human value And Professional ethics
9	BO 241 Plant Anatomy and Embryology	Study of commercial value of woods, its various types and embryology of plants	Human value
10	BO 242 Paper II-Plant Biotechnology	Use of plants/ microbes life for welfare of man, study of plant genetics	Human value And Professional ethics



1.3.1. Institution integrates crosscutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum

Class	Subject	Topic and Cross Cutting Issue
FYBA	Compulsory English	1. Engine Trouble- R. K. Narayan (Human Values) 2. On Saying Please - AG Gardiner (Human Values) 3. The Gift of the Magi-O Henry (Human Values) 4. Leave this Chanting and Singing - Ravindranath Tagore (Human Values and Environment and Sustainability) 5. The Felling of the a Banyan Tree- Dilip Chitre (Human Values and Environment and Sustainability) 6. Communication Skills (Professional Ethics & Human Values)
SYBA	Compulsory English	1. A Simple Philosophy-Seathl (Environment and Sustainability ) 2. The Homecoming-Rabindranath Tagore (Human Values) 3. The Verger-W. Somerset Maugham (Human Values) 4. Palanquin Bearers- Sarojini Naidu-(Gender) 5. On the Grasshopper and Cricket-John Keats (Environment) 6. Pied Beauty-G.M. Hopkins (Environment and Sustainability )
TYBA	Compulsory English	1. The Function of Education - Jiddu Krishnamurti (Professional Ethics) 2. God sees the truth but waits – Leo Tolstoy (Human Values) 3. Strange Meeting - Wilfred Owen (Human Values) 4. Have you Got a Brook in Your Little Heart - Emily Dickinson (Environment sustainability and Human values) 5. Soft Skills and employability Skills (Professional Ethics)
FYBCo m	Compulsory English	1. The Beggar- Anton Chekhav (Human Values) 2. Black Money and the Black Economy- C Rammanohar Reddy (Professional Ethics & Human Values) 3. The Nightingale and the Rose-Oscar Wilde(Human Values and Environment and Sustainability) 4. Up-Hill- Christina Rosetti-( Human Values) 5. Stay Calm- Grenville Kleiser -( Human Values) 6. Communication and Life Skills (Professional Ethics & Human Values)
FYBC A	Business Communication	1. Business Communication (Professional Ethics) 2. Listening Skills (Professional Ethics and Human Values) 3. Soft Skills (Professional Ethics and Human Values)
SYBC A/ SYBS c	AECC	1.A Shadow-R. K.Narayan (Human Values) 2. La Belle Dame Sans Merci- John Keats-(Human Values) 3. Where the Mind is without Fear- Rabindranth Tagore (Human Values & Environment and Sustainability) 4.. Conversational Skills (Professional Ethics and Human Values) 5. Interview Skills (Professional Ethics & Human Values)



**Bharatiya Jain Sanghatana's Arts, Science and Commerce College,  
Wagholi, Pune**

**Zoology Department**

**Curriculum Development: Cross Cutting Issues in University  
Syllabus of Zoology**

Subject/Paper	Class/ Paper No.	Cross-cutting Issues
<b>Harmful Protozoa/ Useful Protozoa:</b>  Economic importance of Phylum Porifera / Cnidaria w.r.t. Corals and Coral reefs / Parasitic adaptations Platyhelminthes/Aschelminthes/Annelida w.r.t. earthworms as friends of farmers and in their role in vermicomposting. /Arthropoda: Useful Insects  Harmful insects/Mollusca/Echinodermata.	FYBSc Paper I	Eco-friendliness, Health, Hygiene
<b>Introduction to Ecology : Ecosystem, Population, Community , Animal interactions.</b>	FYBSc Paper I	Environmental Awareness
Estimation of Dissolved oxygen / Water Alkalinity/ dissolved CO <sub>2</sub> from given water sample,.  Study of animal community structure by quadrat method/Microscopic fauna of freshwater ecosystem / Determination of density, frequency and abundance of species by quadrat method/ Estimation of water holding capacity of given soil sample, Study of Eutrophication in lake/river.	FYBSc Paper III	Environmental Consequences
Study of Agricultural Pest and their control.  Study of Fishery	SYBSc Paper II	Environmental Consequences

# Zoology

Course Title: Animal Diversity –I

Course Code-ZO-111

Semester I & II

No.	Title & Contents	Number of lectures
1.	<b>Harmful Protozoa:</b> <i>Plasmodium vivax</i> (malarial parasite), <i>Entamoebahistolytica</i> (Amoebic dysentery), <i>Trypanosomagambiense</i> (Gambian sleeping sickness). <b>Useful Protozoa:</b> <i>Trichonympha</i> Economic importance of Phylum Porifera. Economic importance of Cnidarians with reference to Corals and Coral reefs. Parasitic adaptations in Platyhelminthes: structural and physiological Economic importance of class Nematoda. Economic importance of Annelida with reference to earthworms as friends of farmers and in their role in vermicomposting. Useful Insects: Honey bee, Lac insect, Silkworm. Harmful insects: Female Anopheles mosquito, Red cotton bug, Rice weevil Economic importance of Mollusca Economic importance of Echinodermata.	(07)



**Course Title: Animal Ecology**

**Course Code: ZO 112**

**Semester I**

**ZO 112: Animal Ecology**

**(2 Credits-30 Lectures)**

<b>No.</b>	<b>Topic &amp; Content</b>	<b>Number of lectures</b>
1.	<b>Introduction to Ecology</b> 1.1 Concepts of Ecology, Environment, Population, Community, Ecosystem, Biosphere, Autecology and synecology.	<b>(02)</b>
2.	<b>Ecosystem</b> 2.1 Types of ecosystems: Aquatic (Freshwater, estuarine, Marine and terrestrial (Forest, Grassland and Desert) 2.2 Structure and Composition of Ecosystem (Abiotic components and biotic components. 2.3 Food chain: Detritus and grazing food chains, Food web, Energy flow through the ecosystem, Ecological pyramids: Number, Biomass, and Energy. 2.4 concept of Eutrophication in lakes and rivers.	<b>(08)</b>
3	<b>Population</b> 3.1 Characteristic of population: Density, Natality, Mortality, Fecundity tables, survivorship curves, age ratio, sex ratio, dispersal and dispersion. 3.2 Exponential and logistic growth, 3.3 Population regulation – density-dependent and independent factors. Population interactions, Gause's Principle with laboratory and field interactions, 3.4 Quadrature, line and belt transect methods.	<b>(08)</b>
4.	<b>Community</b> 4.1 Community characteristics: species richness, dominance, diversity, abundance, vertical stratification, Eco tone and edge effect; Ecological succession with one example.	<b>(07)</b>

5. **Animal interactions**

**(05)**

5.1 Introduction to Animal interactions

5.2 Types of Animal interactions with at least to suitable examples of each

5.2.1-Competition: Interspecific and intraspecific

### 5.2.2- Beneficial Associations:

Commensalism (remora fish on shark, Cattle egrets on livestock),

Mutualism (Termite and Trichonympha, bees and flowers, cleaning symbiosis in fish by prawns).

5.3 Antagonistic associations: Parasitism (Ascaris and man, lice and humans), Prey predation (Lion and deer).

### Course Title: Zoology

### Practical Paper Course Code: ZO113

1. Estimation of Dissolved oxygen from given water sample.
2. Estimation of Water Alkalinity from given water sample.
3. Estimation of dissolved and free carbon dioxide from water sample.
4. Study of animal community structure by quadrat method (Field or Simulation).
5. Study of microscopic fauna of freshwater ecosystem (from pond).
6. Determination of density, frequency and abundance of species by quadrat method.
7. Estimation of water holding capacity of given soil sample.
8. Study of Eutrophication in lake/river.

### S.Y.B.Sc. PAPER II: FIRST SEMESTER ZY-212: APPLIED ZOOLOGY – I

#### 1. Fisheries :

**1.1** An introduction to fisheries and its types (in brief) : Freshwater fisheries, Marine fisheries, Brackish water fisheries.

**1.2** Different types of ponds used in fishery: Nursery pond, rearing pond, Stock pond

**1.3** Habit, habitat and culture methods of following freshwater forms :

**a)** Rohu (*Labeo rohita*) **b)** Catla (*Catla catla*) **c)** Mrigal (*Cirrhinus mrigala*)  
**d)** Giant prawn (*Macrobrachium rosenbergi*)

**1.4** Harvesting methods of following marine forms :

**a)** Harpadon **b)** Mackerel **c)** Lobster **d)** Pearl oyster

**1.5** Crafts and gears in Indian Fishery :

**a)** Crafts – Catamaran, Machwa, Dinghy, Dug out canoe, Built –up boat  
**Gears –** Gill net, Dol net, Purse net, Rampani net, Cast net

**1.6** Fishery byproducts :

**a)** Fish meal **b)** Fish flour **c)** Liver oil **d)** Ising glass **e)** Fish glue **f)** Fish manure  
**g)** Fish fin soup

**1.7** Fish preservation technique :

**a)** Chilling **b)** Freezing **c)** Salting **d)** Drying **e)** Canning

#### 2. Agricultural Pests and their control :

**2.1** An introduction to Pest, types of pests (agricultural, household, stored grain, structural, veterinary, forestry and nursery)

**2.2** Major insect pests of agricultural importance ( Marks of identification, life cycle, nature of damage and control measures)

**a)** Jowar stem borer **b)** Red cotton bug **c)** Brinjal fruit borer **d)** Mango stem borer  
**e)** Pulse beetle **f)** Rice weevil

**2.3** Non insect pest : Rats and Bandicoots, Crabs, Snails, Slugs, Birds and Squirrels

**2.4** Pest control practices in brief : Cultural control, Physical control, Mechanical control, Chemical control, Biological control, Pheromonal control and Concept of IPM in brief

**2.5** Plant protection appliances : Rotary duster, Knapsack sprayer, Cynogas Pump.

**2.6** Hazards of pesticides on human and antidotes.