



List of Revised Courses

Department : Zoology

Program Name : *M. Sc.*

Academic Year : *2018-19*

List of Revised Courses

Sr. No.	Course Code	Name of the Course
01.	LZT 303 A	Fish Culture and Pathology

A. V. K. Bhaske

गुरु घासीदास विश्वविद्यालय
कोनी, बिलासपुर - 495009 (छ.ग.)
Department of Zoology
Guru Ghasidas Vishwavidyalaya, Bilaspur



Minutes of Meetings (MoM) of Board of Studies (BoS)

Academic Year : 2018-19

School : School of Studies of Life Sciences

Department : Zoology

Date and Time : July, 07, 2017- 09: 30 to 06:30 PM

Venue : Department of Zoology

The scheduled meeting of member of Board of Studies (BoS) of Department of Zoology, School of Studies of Life Sciences, Guru Ghasidas Vishwavidyalaya, Bilaspur was held to design and discuss the M. Sc. (I to IV semesters) scheme and syllabi.

The following members were present in the meeting:

1. Prof. Renu Maheshwari (External Expert Member BoS, Dept. of Zoology, Raipur, CG.).
2. Dr. Monika Bhadauria (HOD, Associate Prof., Dept. of Zoology.-cum Chairman, BOS).
3. Dr. Seema Rai (Member BoS, Associate Professor, Dept. of Zoology).
4. Dr. Santosh Singh (Member, Assistant Professor, Dept. of Zoology).

Following points were discussed during the meeting

1. Papers of semester I to IV were thoroughly discussed and less than 20% modifications was approved by the BOS members in seven papers (02 core papers, five discipline specific Electives).
2. More than 20% modifications was suggested by the BOS members in four core papers and one Discipline Specific Electives (DSE).
3. One new elective paper (Biochemistry and Molecular Biology) was introduced in Discipline Specific Electives (DSE) in semester III and IV.

The committee discussed and approved the scheme and syllabi. The following DSE course is more than 20% revised for M. Sc. - III to IV semesters:

Sr. No.	Course Code	Name of the Course
01.	LZT 303 A	Fish Culture and Pathology

S. V. K. Bhaskar
HOD
Department of Zoology
Guru Ghasidas Vishwavidyalaya, Bilaspur

Signature & Seal of HoD

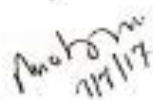


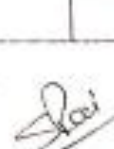
Scheme and Syllabus

Department of Zoology, GGV, Bilaspur (CG)

Discipline Specific Elective - Mammalian Reproductive Physiology and Endocrinology (B)-2	LZT 304 B	Male and Female Reproduction	4	4	40	60	100
Discipline Specific Elective - Fish Biology (C)-1	LZT 303 C	Fish Culture and Pathology	4	4	40	60	100
Discipline Specific Elective - Fish Biology (C)-2	LZT 304 C	Fish Anatomy and Physiology	4	4	40	60	100
Discipline Specific Elective - Neuroscience (D)1	LZT 303 D	Brain and Neuron	4	4	40	60	100
Discipline Specific Elective - Neuroscience (D)2	LZT 304 D	Developmental Neurobiology	4	4	40	60	100
Discipline Specific Elective - (E) Toxicology 1	LZT 305 E	An Introduction to Toxicology	4	4	40	60	100
Discipline Specific Elective - (E) Toxicology 2	LZT 304 E	Occupational and Environmental Toxicity	4	4	40	60	100


 Manish
 Head
 Department of Zoology
 Guru Ghasidas Vishwavidyalaya
 Bilaspur (C.G.)


 Anshu
 11/11/17


 Shashi
 21/11/17



Department of Zoology, GGV, Bilaspur (CG)

Major Elective Course C: Fish Biology

LZT 303 C: Fish Culture and Pathology

Unit 1: Fish culture systems: Different ponds of a fish farm, Formulation and operation of different types of hatcheries, Fish culture in paddy fields, Sewage-fed fisheries, Larvivorous fishes, Weed fishes, Hill stream adaptations in fishes.

Unit 2: Pond management: Physico-chemical properties of pond water and their maintenance, Manuring (organic and inorganic) and liming, Composite fish farming, Predatory and weed fishes and their eradication, Aquatic vegetation and its control.

Unit 3: Exotic fishes and their role in fish farming, Criteria of selection of cultivable fishes, Age and growth: Growth rate and aging, Length weight relationship, gonadosomatic index.

Unit 4: Fish pathology, prophylaxis and therapy: Main causes of disease in farmed fish, Preventing diseases through proper management, Common disease symptoms in fish,

Protozoan diseases: Cyclochaetiasis, Costiasis, (sliminess of skin), Helminth parasites: *Gyrodactylus*, *Dactylogyrus*.

Unit 5: Crustacean parasites: *Ergasilus*, Fungal diseases: Branchiomycosis (gill rot), Bacterial diseases: Tail and Fin rot, Furunculosis, Viral diseases: Papillomatosis (cauliflower disease), Nutritional diseases: Avitaminoses.

Books Recommended

1. Chakroff, M.: Freshwater Fish Pond Culture and Management, Scientific Publishers, 1987.
2. Davis, H. S.: Culture and Diseases of Game Fishes, University of California Press, 1956
3. Duijn, C. V.: Diseases of Fishes, London Iliffe Books Ltd, 1967.
4. Hall, C. B.: Ponds and Fish Culture, Agro Botanical Publishers, 1994
5. Hora, S. L. and Pillay, T.V. R.: Handbook on Fish Culture in the Indo-Pacific Region, Fisheries Division, Biology Branch, FAO, 1962.
6. Jhingran, V.G.: Fish and Fisheries of India. Hindustan Publishing Corporation, New Delhi. 1985.
7. Khanna S. S. and H. R. Singh.: A textbook of Fish Biology and Fisheries, Narendra Publishing House, 2003
8. Ribelin, W. E. & Migaki, G.: The Pathology of Fishes, The Univ. of Wisconsin Press, 1975.

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S. Rai
S. Rai
27/11/20