



List of Revised Courses

Department : **Zoology**

Programme Name : **B. Sc**

Academic Year : **2021-22**

List of Revised Courses

Sr. No.	Course Code	Name of the Course
1.	LS/ZOO/SEC-401L	Medical Diagnostics

A. V. K. Khosla

विभागप्रभु
HEAD
जन्तु विज्ञान विभाग
Department of Zoology
गुरु घासीदास वि.वि., बिलासपुर
Guru Ghasidas Vishwavidyalaya, Bilaspur



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

Academic Year : 2021-22

School : School of Studies in Life Sciences

Department : Zoology

Date and Time : 18 Aug 2020 - 11:30 AM

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 B. Sc. scheme and syllabi.

The following members were present in the meeting:

1. Prof. Shivkant Kumar Prasad (External Expert Member BoS, Dept. of Biosciences, Pandit Ravishankar Shukla University).
3. Prof. LVKS Bhaskar (HOD, Dept. of Zoology.-cum Chairman, BOS)
4. Dr. Rohit Seth (Member BoS, Associate Professor, Dept. of Zoology)
5. Dr. Sushant Kumar Verma (Member, Assistant Professor, Dept. of Zoology)

Following points were discussed during the meeting

1. In B.Sc. syllabus 6 core papers are revised with less than 20% change.
2. 01 DSE paper and 01 GE and are also revised with less than 20% change. 01 SEC paper was revised.

The committee discussed and approved the scheme and syllabi. The following courses were revised in B. Sc. Zoology (III to VI Semesters):

Sr. No. Course Code Name of the Course

1. LS/ZOO/SEC-401L Medical Diagnostics

L.V.K.S. Bhaskar

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Guru Ghasidas Vishwavidyalaya, Bilaspur
Signature & Seal of HoD

गुरु घासीदास विश्वविद्यालय
(केन्द्रीय विश्वविद्यालय अधिनियम 2009 क्र. 25 के अंतर्गत स्थापित केन्द्रीय विश्वविद्यालय)
कोनी, बिलासपुर - 495009 (छ.ग.)



Guru Ghasidas Vishwavidyalaya
(A Central University Established by the Central Universities Act 2009 No. 25 of 2009)
Koni, Bilaspur - 495009 (C.G.)

Scheme and Syllabus

Scheme and Syllabus

For

B.Sc. Honours Zoology

Under

Choice Based Credit System (CBCS)

Applicable from Session 2020-2021 to onwards

Department of Zoology

School of Life Sciences

Guru Ghasidas Vishwavidyalaya, Bilaspur (CG)

SK Ansari

Bhaskar
SK Sharma

Alwara



Core Course-7 Practical	LS/ZOO/CC-303 P	Lab Course	2	4	30 (15+15)	70
Generic Elective-3 Theory	LS/ZOO/GE-301 L	Food Nutrition and Health	4	4	30 (15+15)	70
Generic Elective-3 Practical	LS/ZOO/GE-301 P	Lab Course	2	4	30 (15+15)	70
Skill Enhancement Course-1	LS/ZOO/SEC-301 L	Scripture	2	2	30 (15+15)	70
Skill Enhancement Course-1	LS/ZOO/SEC-301 P	Lab Course	2	4	30 (15+15)	70
TOTAL			18	34	30	70
SEMESTER IV						
Core Course-8 Theory	LS/ZOO/CC-401 L	Comparative anatomy of vertebrates	4	4	30 (15+15)	70
Core Course-8 Practical	LS/ZOO/CC-401 P	Lab Course	2	4	30 (15+15)	70
Core Course-9 Theory	LS/ZOO/CC-402 L	Physiology: Life Sustaining Systems	4	4	30 (15+15)	70
Core Course-9 Practical	LS/ZOO/CC-402 P	Lab Course	2	4	30 (15+15)	70
Core Course-10 Theory	LS/ZOO/CC-403 L	Biochemistry of Metabolic Processes	4	4	30 (15+15)	70
Core Course-10 Practical	LS/ZOO/CC-403 P	Lab Course	2	4	30 (15+15)	70
Generic Elective-4 Theory	LS/ZOO/GE-401 L	Insect Vectors and Diseases	4	4	30 (15+15)	70
Generic Elective-4 Practical	LS/ZOO/GE-401 P	Lab Course	2	4	30 (15+15)	70
Skill Enhancement Course-2	LS/ZOO/SE-401	Medical Diagnostics	2	2	30 (15+15)	70
Skill Enhancement Course-2	LS/ZOO/SE-401	Lab Course	2	4	30 (15+15)	70
TOTAL			28	34	30	70
Summer Internship: 15 days	Swayam Swachhita / NSS / Industrial/ others		2	61/day	--	100
SEMESTER V						
Core Course-11 Theory	LS/ZOO/CC-501 L	Molecular Biology	4	4	30 (15+15)	70
Core Course-11 Practical	LS/ZOO/CC-501 P	Lab Course	2	4	30 (15+15)	70
Core Course-12 Theory	LS/ZOO/CC-502 L	Principles of Genetics	4	4	30 (15+15)	70
Core Course-12 Practical	LS/ZOO/CC-502 P	Lab Course	2	4	30 (15+15)	70
Discipline Specific Elective-1 Theory	LS/ZOO/DSE-501(A) L	*A. Biology of Insect (MOOCS)	4	4	30 (15+15)	70
	LS/ZOO/DSE-501(B) L	*B. Immunology (MOOCS)				
Discipline Specific Elective-1 Practical	LS/ZOO/DSE-501(A) P	Lab Course A	2	4	30 (15+15)	70
	LS/ZOO/DSE-501(B) P	Lab Course B				
Discipline Specific Elective-2 Theory	LS/ZOO/DSE-502(A) L	A. Basics of Neuroscience	4	4	30 (15+15)	70
	LS/ZOO/DSE-502(B) L	B. Reproductive Biology				
Discipline Specific Elective-2 Practical	LS/ZOO/DSE-502(A) P	Lab Course A	2	4	30 (15+15)	70
	LS/ZOO/DSE-502(B) P	Lab Course B				
TOTAL			24	32		

(Signature) *Manu* *S. Kumar* *Ramesh*



Department of Zoology, School of Life Sciences, GGV, Bilaspur (CG)

SKILL ENHANCEMENT COURSES

LS/ZOO/SEC-401 L

MEDICAL DIAGNOSTICS

THEORY

(Credits 4)

Unit 1: Introduction to Medical Diagnostics and its Importance

10

Functional components of Chemical Laboratories, Identification of common equipment, principle and care of laboratory instruments. Basic needs of clinical laboratory technician, awareness of soft skills. NABL and SOP. Basic causes of accidents in laboratories.

Unit 2: Collection of Specimen and Disposal of waste

10

General principles, containers, rejection. Samples-Urine, Faeces, Sputum, Pus, Body Fluids, Swab, Blood. Importance of biomedical waste. Disposal of laboratory/hospital waste. Non-infectious waste, infected sharp waste disposal, infected non-sharp waste disposal.

Unit 3: Basic Haematological Techniques

10

Preparation of blood collection-Basic steps for drawing blood by vein, capillary and artery puncture. Complications during and after blood collection. Specimen rejection criteria for blood. Anticoagulants-types and concentration. Transport of blood sample. Effect of storage on blood cell morphology. Universal precautions.

Unit 4: Diagnostic Methods Used for Analysis of Blood

10

Blood composition, Preparation of blood smear and Differential Leukocyte Count using Leishman's stain, Platelet count using haemocytometer, Erythrocyte Sedimentary Rate, Packed Cell Volume .

Unit 5: Diagnostic Methods Used for Urine Analysis

10

Urine analysis: Physical characteristics; Abnormal constituents, Urine culture. Urinary tract infection, Kidney Disease and diabetes

Unit 6: Clinical Microbiology, Culture and Staining

10

Culture media: Definition, uses, basic requirements, classification, Agar, Peptone; Transport, Sugar and Anaerobic media, Containers and forms of media. Staining methods: Simple, Gram staining, Zeihl-Neelsen staining or AFB staining, Negative impregnation, Antibiotic sensitivity test

Course Objective:

To impart adequate knowledge on the diagnostics methods used for analysis of blood and urine. To understand the fundamental principles and applications of medical imaging using X-Ray, PET, MRI and CT Scan

Course Outcomes:

Students will learn how doctors diagnose patients using diagnostic tools and resources. Students will be aware of different methods and machines doctors use every day to diagnose patients.

52