

| Department : Zoology      |                   |  |  |  |
|---------------------------|-------------------|--|--|--|
| Academic Year : 2024-2025 |                   |  |  |  |
| Sr. No.                   | Programme<br>Code | Name of the Programme                          |  |  |
| 01.                       | 118               | Bachelor of Science in Zoology                 |  |  |
|                           | Semester VI       | Paper code: ZOUFDD1-Dissertation/ Project work |  |  |

#### REVISED SCHEME AND SYLLABUS

FOR

# Learning Outcomes based Curriculum Framework (LOCF)

For

ZOOLOGY|HONOURS

DEPARTMENT OF ZOOLOGY

SCHOOL OF LIFE SCIENCES

GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR (CG)

2021

### गुरु घासीदास विश्वविद्यालय (क्ट्रीय विश्वविद्यालय अधिक 2000 ह. 25 वे आर्था स्वाधित केट्रीय विश्वविद्याल) 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.)

|                              |   | Semester V   |     |    |     |     |
|------------------------------|---|--|-----|----|-----|-----|
| CC-11 Theory                 | ZOUETTI   | Biotechniques  | 3   | 3  | 30  | 70  |
| CC-11 Practical              | ZOUELTI   | Lab Course   | 2   | 4  | 30  | 70  |
| CC-12 Theory                 | y ZOUETT2 Microbiology, Parasitology and Immunology |  | 3   | 3  | 30  | 70  |
| CC-12 Practical              |   |  |     | 4  | 30  | 70  |
| OSE-1Theory                  | ZOUETD1   | Mammalian Physiology                                       | 3   | 3  | 30  | 70  |
| OSE-1 Practical              | ZOUELD1   | Lab Course   | 2   | 4  | 30  | 70  |
| OSE-2Theory                  | ZOUETD2   | Endocrinology  | 3   | 3  | 30  | 70  |
| OSE-2 Practical              | ZOUELD2   | Lab Course   | 2   | 4  | 30  | 70  |
| AEC-5 Theory                 |   | To be drawn from the pool of AEC                           | 1   | 1  | 30  | 70  |
| AEC-5 Practical              |   | To be drawn from the pool of AEC                           | 1   | 2  | 30  | 70  |
|                              |   | Additional Credit Course                                   |     |    |     |     |
|                              |   | TOTAL  | 22  | 31 | 300 | 700 |
|                              |   | Semester VI  |     |    |     |     |
| CC-13 Theory                 | ZOUFTT1   | Biostatistics and Bioinformatics                           | 3   | 3  | 30  | 70  |
| CC-13 Practical              | ZOUFLT1   | Lab Course   | 2   | 4  | 30  | 70  |
| CC-14 Theory                 | ZOUFTT2   | Applied Zoology  | 3   | 3  | 30  | 70  |
| CC-14 Practical              | ZOUFLT2   | Lab Course   | 2   | 4  | 30  | 70  |
| OSE-3Theory                  | ZOUFTD1   | Neuroscience / Wildlife Conservation and Management        | 3   | 3  | 30  | 70  |
| OSE-3 Practical              | ZOUFLD1   | Lab Course based on theory paper of DSE 3                  | 2   | 4  | 30  | 70  |
| field study/ tour            | ZOUFSF1   | Followed by report submission and Seminar                  | 2   | 4  | 30  | 70  |
| Dissertation/<br>roject work | ZOUFDD1   | Followed by report submission, presentation and viva-voce- | 7   | 14 | 30  | 70  |
|                              |   | Additional Credit Course                                   |     |    |     |     |
|                              |   | TOTAL  | 23  | 37 | 240 | 560 |
|                              |   | TOTAL CREDITS  | 133 |    |     |     |

As per UGC LOCF guidelines, University / department have liberty to offer GEC, AEC and SEC courses offered by any department to students of other departments.

The No. of GEC course is four. One GEC course is compulsory in first 4 semesters each. Pool for GEC will be given by Dean.

The No. of AEC course is five. One AEC course is compulsory in first 5 semesters each.

The No. of SEC course is two. One SEC course is compulsory in first 2 semesters each.

Pool for AEC and SEC will be given by University.

List of GEC, AEC and SEC offered by the department

| S No | GEC   | AEC                            | SEC                       |
|------|---|--------------------------------|---------------------------|
| 1    | Exploring the Brain: Structure and Function | History of Indian science      | Reproductive technologies |
| 2    | Vectors, Diseases and Management            | Personality development        | Aquaculture               |
| 3    | Food, Nutrition and Health                  | Human health and sex education | Toxicology                |
| 4    | Global Environmental Issues                 | Human nutrition                | Sericulture               |

Department may offer at least one paper in whole UG program on MOOC's platform and it will be compulsory to all students.

Summer Internship\*: duration will be 2-4 weeks (minimum 90 working hours).

#### Abbreviations

CC= Course code; GEC= Generic Elective Course; AEC= Ability Enhancement Course; SEC= Skill Enhancement Course; DSE= Discipline Specific Elective Course.

(Subject to approval by the competent authority)

Prof. S K Prasad

(External Expert)

Dr. Rohit Seth

(Member)

Dr. S K Verma

(Member)

Lyks Charts Prof. LVKS Bhaskar

(HOD)

## गुरू घासीदास विश्वविद्यालय (क्ट्रीर विस्तिवास विश्वविद्यालय) कोनी, बिलासपुर - 495009 (छ.ग.)



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

Programme Name: B. Sc.

Academic Year : 2024-25

# List of students undertaking Field Projects/Projects / Internships

| Sr. No. | Name of the Student | Title of the Dissertation/Project work   | Page No |
|---------|---------------------|--|---------|
| 1.      | Aastha Dewangan     | Effects of herbicides on haematological parameters in fishes                               | 1–3     |
| 2.      | Aastha Rani         | Oxidative stress in fishes induced by herbicides   | 4–6     |
| 3.      | Amisha Choudhary    | An Overview On Food Additives  | 7–9     |
| 4.      | Anjali Dhirvi       | Impact of climatic change on the biodiversity of ecosystem and species distribution        | 10–12   |
| 5.      | Anurag Kumar        | Water pollution: A threat to human health  | 13–15   |
| 6.      | Apeksha Gupta       | Herbicides induced biochemical changes in fish   | 16–18   |
| 7.      | Archita Pathak      | Diabetes in Dogs   | 19–21   |
| 8.      | Ashish Kumar        | Survey on literacy rate of koni  | 22–24   |
| 9.      | Bhumika Kaushik     | Histopathological changes induced by herbicides in fishes                                  | 25–27   |
| 10.     | Bhuvneshwar Jagat   | Obesity: A Review  | 28–30   |
| 11.     | Deepika Kashyap     | Patterns of migration in birds   | 31–33   |
| 12.     | Deepti Patel        | Decline in honey bee and its impact on biodiversity  | 34–36   |
| 13.     | Devika Patel        | Acute toxicity and behavioral responses of fishes exposed to herbicides: A critical review | 37–39   |
| 14.     | Dipti Dugge         | Impacts of biodegradable and non-biodegradable waste on environment                        | 40–42   |
| 15.     | Dishika Patel       | Solid Waste Management   | 43–45   |
| 16.     | Divya Bharti        | Environmental Effects on Biodiversity  | 46–48   |
| 17.     | Divya Chaturvedi    | Conservation Strategies for Endangered Species   | 49–51   |
| 18.     | Enkesh Markam       | Degradation of blastics by microbes  | 52–54   |
| 19.     | Isha Patel          | Vermiwash  | 55–57   |
| 20.     | J. Sheeba Rani      | Food Preservatives: A Comprehensive<br>Overview  | 58–60   |
| 21.     | Jeevan              | Evaluation of antioxidant activity of <i>Cussia alata L.</i> extract                       | 61–63   |

# गुरू घासीदास विश्वविद्यालय (क्षेत्र विस्ववस्य अधिक 200 ह. 25 वे संबंध स्वविद केंद्रेप विश्ववस्य) 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.)

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|-------------------------|--|--|
| Juhi Gupta              | Faunal Diversity At Ecosystem Level in India   | 64–66  |
| Kajal Lahare            | Autosomal Dominant polycystic kidney disease (ADPKD)   | 67–69  |
| Kanak Soni              | Dopamine Pathway in Schizophrenia  | 70–72  |
| Keshav Kunal Sharma     | A Review on Impact of Habitat Destruction on Biodiversity  | 73–75  |
| Kiran Porte             | Role of Hormones in Animal Migration   | 76–78  |
| Krish Anant             | Structural and Toxicological Aspects of Lipopolysaccharide   | 79–81  |
| Kushi Dewangan          | Genetic Biomarkers for early detection of Alzheimer's disease  | 82–84  |
| M. Archana              | Toxicological Effects of Air Pollution on Human Health   | 85–87  |
| Mahendra Bareth         | Microplastic in Aquatie Environment  | 88–90  |
| Manish Kumar Kurrey     | Air pollutants potential risk to human health  | 91–93  |
| Manisha Patel           | Obesity as a Medical Problem   | 94–96  |
| Mitali Kumbhkar         | Toxicological Aspeet of Aleohol  | 97–99  |
| Naveen Diwakar          | Impact of Urbanization on Birds Life   | 100-102  |
| Navin Kumar Gupta       | Cultural landscape and tribal dispesal in birkona village  | 103–105  |
| Neeta Bhaskar           | Role of Zoos and Sanctuaries in Biodiversity<br>Conservation   | 106–108  |
| Nidhi Rani Gritlahre    | Drinking Behaviour in Humans   | 109–111  |
| Nikhil Kumar Dhritlahre | Wetland ecosystem as critical habitats for migratory and resident birds in India: patterns, threats, and conservation strategies   | 112–114  |
| Nikita Patel            | Effect of Climate change in aquaculture  | 115–117  |
| Nisha Kanwar            | A comprehensive study on diabetes insipidus  | 118–120  |
| Nusiaba Afza            | Effect of Climate change in aquaculture  | 121–123  |
| Omjyoti Dansena         | Impact of thermal stress on fishes   | 124–126  |
| Pradeep Kumar Rout      | Role of Advancrd Glycation End Product in Diabetic encephalopathy  | 127–129  |
| Pratibha Patel          | Cyanosis (Blue baby)   | 130–132  |
| Priyanshi Sharma        | Impact of commonly used pesticides on hormone receptor activity in aquatic animals   | 133–135  |
| Projesh Kumar Choudhary | Cardiovascular Impact of Corona Virus  | 136–138  |
| Rashmi Tiwari           | Effects of micro-plastics on reproduction  | 139–141  |
| Roshan Patel            | A study on vulture   | 142–144  |
| Rupendra Kumar Kashyap  | Effect of cannabis   | 145–147  |
|                         | Kajal Lahare Kanak Soni Keshav Kunal Sharma Kiran Porte Krish Anant Kushi Dewangan M. Archana Mahendra Bareth Manish Kumar Kurrey Manisha Patel Mitali Kumbhkar Naveen Diwakar Navin Kumar Gupta Neeta Bhaskar Nidhi Rani Gritlahre Nikhil Kumar Dhritlahre Nikita Patel Nisha Kanwar Nusiaba Afza Omjyoti Dansena Pradeep Kumar Rout Pratibha Patel Priyanshi Sharma Projesh Kumar Choudhary Rashmi Tiwari Roshan Patel | Kajal Lahare  Autosomal Dominant polycystic kidney disease (ADPKD)  Kanak Soni  Dopamine Pathway in Schizophrenia  A Review on Impact of Habitat Destruction on Biodiversity  Role of Hormones in Animal Migration  Krish Anant  Structural and Toxicological Aspects of Lipopolysaccharide  Kushi Dewangan  M. Archana  Toxicological Effects of Air Pollution on Human Health  Mahendra Bareth  Microplastic in Aquatie Environment  Manish Kumar Kurrey  Air pollutants potential risk to human health  Manisha Patel  Obesity as a Medical Problem  Mitali Kumbhkar  Toxicological Aspect of Aleohol  Naveen Diwakar  Impact of Urbanization on Birds Life  Cultural landscape and tribal dispesal in birkona village  Neeta Bhaskar  Role of Zoos and Sanctuaries in Biodiversity Conservation  Nidhi Rani Gritlahre  Drinking Behaviour in Humans  Wetland ecosystem as critical habitats for migratory and resident birds in India: patterns, threats, and conservation strategies  Nikita Patel  Effect of Climate change in aquaculture  Nisha Kanwar  A comprehensive study on diabetes insipidus  Nusiaba Afza  Effect of Climate change in aquaculture  Omjyoti Dansena  Impact of thermal stress on fishes  Role of Advancrd Glycation End Product in Diabetic encephalopathy  Pratibha Patel  Cyanosis (Blue baby)  Impact of commonly used pesticides on hormone receptor activity in aquatic animals  Projesh Kumar Choudhary  Cardiovascular Impact of Corona Virus  Rashmi Tiwari  Effects of micro-plastics on reproduction |

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

| 50. | S Junedh Sahu                                   | Metal Induced Toxic Effects on Aquatic Animals                        | 148–150 |
|-----|---|---|---------|
| 51. | Sahaj Juneja                                    | Effect of global warming on Himalayan biodiversity                    | 151–153 |
| 52. | Sanjana Yadav                                   | Impacts of overconsumption on environment                             | 154–156 |
| 53. | Sanket Prakash Sai                              | Wildlife Conservation and Managament                                  | 157–159 |
| 54. | Shaily Theresa Khalkho                          | Impact of acid rain on aquatic life                                   | 160–162 |
| 55. | Shalini Khande                                  | Psychological aspects of sickle cell anemia                           | 163–165 |
| 56. | Sheetla Dewangan                                | Genetic damage induced by herbicides in fishes                        | 166–168 |
| 57. | Shivani Khairwar                                | Medical Treatments and management of endometriosis                    | 169–171 |
| 58. | Shreya Patra                                    | An Overview on Microcystin and its Effect on Living Organisms         | 172–174 |
| 59. | Sonal Neurotransmitters Serotonin and Behaviour |   | 175–177 |
| 60. | Sreya T P                                       | Migratory patterns of birds   | 178–180 |
| 61. | Sudhir Pradhan                                  | Mating Behavoiur in Different Species                                 | 181–183 |
| 62. | Tanishka Rai Ratre                              | The impact of drug residue in animal products on human being          | 184–186 |
| 63. | Tarani Sahu                                     | Therapies of sickle cell anemia                                       | 187–189 |
| 64. | V. Bhavana                                      | Impact of food preservatives on fertility                             | 190–192 |
| 65. | Vineet Kumar                                    | Black Pearl   | 193–195 |
| 66. | Yashawant Kumar Chaure                          | Bird Migration  | 196–198 |
| 67. | Yashika Bharti                                  | Microplastic Pollution in Aquaculture: Source, Impacts and Management | 199–201 |

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