



Department of Zoology

Maulana Azad College

8, Rafi Ahmed Kidwai Road, Kolkata - 700013
 Email: zoology@maulanaazadcollegekolkata.ac.in
 Website: <https://maulanaazadcollegekolkata.ac.in>

Syllabus: [View](#)

Curriculum / Lesson Plan : 2022-23 Postgraduate Course in Zoology

| Semester, [Period of Semester] | Course Code | Course Name | Brief Description of the Topics | Name of the Faculty | No. of Lectures |
|-------------------------------------|-------------------------------------|---|---|--|-----------------|
| Sem - I (July-December), 2022 | ZCT 101 | Invertebrate Functional Forms and Adaptations | 13 Topics | Dr. Sanjukta Manna, Dr. Panchali Sengupta, Dr. Dipak Kumar Som, Dr. Rajarshi Ghosh, Dr. Abhishek Mukherjee | 10 |
| | ZCT 102 | Ecological Theories | Population Ecology | Dr. Abhishek Mukherjee | 3 |
| | | | Community Ecology | Dr. Abhishek Mukherjee | 2 |
| | | | Ecological crises and Management | Dr. Abhishek Mukherjee, Dr. Rajarshi Ghosh | 5 |
| | | | Behavioural Ecology | Dr. Abhishek Mukherjee | 3 |
| | | | Ecological Economics | Dr. Abhishek Mukherjee | 3 |
| | ZCT 103 | Cell Biology | 7 Topics | Dr. Panchali Sengupta, Dr. Abhishek Mukherjee, Dr. Nabanita Ghosh, Dr. Subir Chandra Dasgupta | |
| | ZCT 104 | Genetics | Chromatin Dynamics | Dr. Sujit Kumar Bhowal, Dr. Susanta Roy Karmakar | 5 |
| | | | DNA Replication & regulation | Dr. Susanta Roy Karmakar | 2 |
| | | | Regulation of gene expression | Dr. Susanta Roy Karmakar, Dr. Subir Chandra Dasgupta | 5 |
| | | | Translation & Post Translational events | Dr. Sujit Kumar Bhowal | 4 |
| | | | Recombination & repair | Dr. Subir Chandra Dasgupta | 4 |
| | | | Transposable Genetic Element | Dr. Rajarshi Ghosh | 4 |
| | | | Genetics of Cell cycle | Dr. Nabanita Ghosh | 4 |
| | | | Microbial Genetics | Dr. Sujit Kumar Bhowal | 4 |
| Somatic cell genetics | Dr. Subir Chandra Dasgupta | 4 | | | |
| ZCP 105 | Laboratory Course for Core Subjects | 10 topics | Dr. Sanjukta Manna, Dr. Sujit Kumar Bhowal, Dr. Dipak Kumar Som, Dr. Rajarshi Ghosh, Dr. Abhishek Mukherjee, Dr. Susanta Roy Karmakar | 15 | |



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|---|--|---|---|---|-----------------|
| Sem - II (January- June), 2023 | ZCT 206 | Vertebrate Functional Forms and Adaptations | Protochordata | Dr. Dipak Kumar Som | 3 |
| | | | Integumentary system | Dr. Sanjukta Manna | 3 |
| | | | Skeletal system | Dr. Dipak Kumar Som | 3 |
| | | | Cardiovascular system | Dr. Rajarshi Ghosh | 3 |
| | | | Nervous system & Sense organ | Dr. Panchali Sengupta, Dr. Rajarshi Ghosh | 3 |
| | | | Respiratory system | Dr. Panchali Sengupta | 3 |
| | | | Structural Adaptation | Dr. Subir Chandra Dasgupta | 3 |
| | ZCT 207 | Developmental Biology & Neurobiology | Principles of Developmental Biology | Dr. Sujit Kumar Bhowal | 3 |
| | | | Metamorphosis and organogenesis in model organisms- Drosophila | Dr. Sanjukta Manna, Dr. Subir Chandra Dasgupta, Dr. Nabanita Ghosh | 5 |
| | | | Regenerative Biology | Dr. Sujit Kumar Bhowal | 3 |
| | | | Life of a neuron | Dr. Subir Chandra Dasgupta | 3 |
| | | | Neurophysiology | Dr. Rajarshi Ghosh | 4 |
| | ZCT 208 | Biochemistry and Genetic Engineering | Biochemistry: 6 Topics | Dr. Sujit Kumar Bhowal, Dr. Dipak Kumar Som, Dr. Rajarshi Ghosh, Dr. Panchali Sengupta | 10 |
| | | | Genetic Engineering: 4 Topics | Dr. Subir Chandra Dasgupta, Dr. Abhishek Mukherjee, Dr. Susanta Roy Karmakar | 8 |
| ZCT 209 | Parasitology and Immunology | 13 Topics | Dr. Sanjukta Manna, Dr. Nabanita Ghosh, Dr. Abhishek Mukherjee | 15 | |
| ZCP 210 | Laboratory Course for Core Subjects | 16 Topics | Dr. Subir Chandra Dasgupta, Dr. Abhishek Mukherjee, Dr. Sanjukta Manna, Dr. Nabanita Ghosh, Dr. Panchali Sengupta, Dr. Rajarshi Ghosh | 20 | |
| Sem - III (July- December), 2022 | ZCT 311 | Conservation biology | 7 Topics | Dr. Dipak Kumar Som, Dr. Abhishek Mukherjee, Dr. Susanta Roy Karmakar | 11 |
| | ZCT 312 | Endocrinology & Comparative Animal Physiology | 12 Topics | Dr. Subir Chandra Dasgupta, Dr. Abhishek Mukherjee, Dr. Sanjukta Manna, Dr. Nabanita Ghosh, Dr. Panchali Sengupta, Dr. Rajarshi Ghosh | 20 |
| | ZET 314 | Resource Ecology | 7 Topics | Dr. Abhishek Mukherjee, | 40 |
| | ZET 315 | Environmental Biology and Toxicology | 8 Topics | Dr. Rajarshi Ghosh | 40 |
| | ZET 318 | Applied Entomology | 8 Topics | Dr. Dipak Kumar Som | 45 |
| | ZET 320 | Molecular Cell Biology | 6 Topics | Dr. Susanta Roy Karmakar, Dr. Sujit Kumar Bhowal | 45 |
| | ZET 328 | Applied Parasitology | 10 Topics | Dr. Sanjukta Manna, Dr. Nabanita Ghosh | 45 |



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|----------------------------------|--|---|---------------------------------------|--|-----------------|
| | CBCC A3 (BCM GE-31) | Fundamentals of Biochemistry I | 5 Topics | Dr. Uma Siddhanta | 30 |
| | CBCC A3 (BOT GE-32) | Biology & Application of Flowering Plants | 7 Topics | Dr. Timir Baran Jha, Dr. Debabrata Mukhopadhyay, Dr. Madhuvanti Chatterjee, Dr. Naimuddin | 30 |
| Sem - IV (January-June), 2023 | ZCT 429 | Taxonomy & Biostatistics | Characters and character states | Dr. Dipak Kumar Som | 4 |
| | | | Taxa and species | Dr. Abhishek Mukherjee, | 4 |
| | | | Approaches in classification | Dr. Abhishek Mukherjee, | 4 |
| | | | Trends in Phylogenetic reconstruction | Dr. Abhishek Mukherjee, | 4 |
| | | | Descriptive Statistics | Dr. Dipak Kumar Som | 4 |
| | ZCT 430 | Animal Behavior and Evolutionary Biology | Sampling and Analysis | Dr. Dipak Kumar Som | 5 |
| | | | Cooperation and conflict | Dr. Sujit Kumar Bhowal | 3 |
| | | | Foraging | Dr. Abhishek Mukherjee | 3 |
| | | | Aggression | Dr. Abhishek Mukherjee, | 3 |
| | | | Natural Selection and Adaptation- | Dr. Subir Chandra Dasgupta | 3 |
| | | | Evolutionary Process | Dr. Susanta Roy Karmakar | 3 |
| | | | Gene Frequencies in Population | Dr. Susanta Roy Karmakar | 3 |
| | ZCP 431 | Laboratory course for core subjects | Patterns and trends in evolution | Dr. Dipak Kumar Som | 3 |
| | | | Species and Speciation | Dr. Sujit Kumar Bhowal | 3 |
| | | | 13 Topics | Dr. Dipak Kumar Som, Dr. Abhishek Mukherjee, Dr. Sanjukta Manna, Dr. Nabanita Ghosh, Dr. Panchali Sengupta, Dr. Rajarshi Ghosh, Dr. Sujit Kumar Bhowal | 20 |
| ZCP 432 | Comprehensive viva voce, Field Study & report | | All respective faculties | | |
| ZCP 431 | Lab internship and Dissertation, Seminar on Dissertation | | All respective faculties | | |

Head
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