Department of Zoology
Sarat Centenary College

Programme Outcome:

Zoology Major and Zoology Minor, CCFUP under NEP, 2020:

The syllabus of Zoology in the undergraduate (UG) level using the NEP-2020 and formulation of a new student centric "Curriculum and Credit Framework for Undergraduate Programmes (CCFUP)", the syllabus of Zoology has been framed following the UGC guidelines facilitating students to pursue their career path by choosing the subject.

While framing the syllabus as per the UGC guidelines, the topics have been kept as generic as possible in order to provide enough freedom to the individual Universities to detail out their own syllabus as per their own infrastructure, expertise and strength.

The main approach of framing this new syllabus is to give the students a holistic understanding of the subject giving substantial weightage to both the core content and laboratory techniques used in Zoology and allied diagnostic subjects. The present syllabus encompasses many new emerging lines of study not restricting the subject merely within the boundary of zoological aspect only like the older syllabus.

The incorporation of a flexible choice-based credit system, a multidisciplinary approach, and many entry and exit alternatives with a focus on the students' chosen majors and minors has been done correctly in accordance with our own infrastructure, competence, and strength.

Keeping in mind and in tune with the changing nature of the subject, adequate emphasis has been given on new techniques as mentioned earlier to understandthe biological methodologies as a whole.

The syllabus has also been framed in such a way that the basic skills of subject are taught to the students, and everyone might not need to go for higher studies and the scope of securing a job after graduation will increase. There is wide deviation in the infrastructure, be it physical or in human resource, in the form of teachers' expertise and ability and aspiration of the students. In addition, scope of research and summer internship has been introduced in the new syllabus, under the University of Burdwan.

SEMESTER WISE COURSE OUTCOME:

Semester-1:

Zoology Major (ZOOL 1011: NON-CHORDATES CCFUP, NEP, 2020): Theory & Practical.

Zoology Minor (ZOOL 1021: NON-CHORDATES CCFUP, NEP, 2020): Theory & Practical.

Programme Outcome:

1.The main objective of this Nonchordate syllabus is to acquaint the students about the diversity of animals (Invertebrates specifically Nonchordates) of this universe especially their taxonomic position in the Animal kingdom as well as their Physiology and Organ systems, starting from the Phyla (*sing.,* Phylum) of Unicellular Protozoans to multicellular major Phyla Hemichordata via the other simple to gradual complex Phyla like acoelomate Phyla Porifera, Cnidaria, Ctenophora, Pseudocoelomate Phyla like Platyhelminthes, Nematoda, and Coelomate Phyla like Annelida, Arthropoda, Mollusca and Echinodermata.2.Practical knowledge is given byshowing and identifying the phyla by specific museum specimens, photographs and also organ systems by dissecting some specific specimens.

3.At the end of the syllabus students learn the Systematics and biology of non-chordates through their adaptive features and their body organization. Comprehend the identification of species and their evolutionary relationships.

ZOOL 1051: SEC (APICULTURE) CCFUP, NEP, 2020): Theory & Practical.

Programme Outcome of the SEC (Skill Enhancement Course) or Apiculture:

The programme outcome of this SEC course is to acquaint the undergraduate students and beginners, about the basic concepts of beekeeping in India. Students will get knowledge about different indigenous and exotic species of honeybees, their culture techniques, honey harvesting, and gather the knowledge of different diseases and enemies of the honey bees. The knowledge gained by the students can be utilized in the field or even to start their own enterprise after completion of the course. A visit to nearby Apiculture centre will give them a hand in hand training of identifying and handling the different honeybees, how to take care of their artificial hives.

Course Outcomes:

1. Get complete knowledge of honeybees and their different casts.
2. Get knowledge about artificial beehive and their uses for apiculture.
3. To know about different diseases on enemies of honeybees.
4. Able to know the techniques of honey extraction and handling of honeybees.
5. Get a brief idea about entrepreneurship in Apiculture.

ZOOL1051: (VERMICULTURE) CCFUP, NEP, 2020): Theory & Practical.

Programme Outcome of the SEC (Skill Enhancement Course) or Vermiculture: Vermiculture is the study Commercial application of technologies that utilize earthworms for degrading waste organic materials for sanitation and agricultural re-use. Earthworms degrade organic waste materials and convert them into vermicompost. The main objective of this course is to provide the students with knowledge of Vermi-technology and its application in agriculture as well as entrepreneurship.

Course Outcomes:

1. The Course has s broad scope for Employability.
2. Students will gather knowledge on soil earthworms; their characteristic features, occurrence, and their influence on soil fertility and solid waste management are included.
3. Students will gather knowledge on Vermicomposting technology in respect of the global level as well as the Indian perspective.
4. Application of Vermiculture products and their benefits in agriculture practice.

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SEMESTER WISE COURSE OUTCOME:

Semester-2:

Zoology Major (ZOOL 2011: CHORDATES CCFUP, NEP, 2020): Theory & Practical.

Zoology Minor (ZOOL 2021: CHORDATES CCFUP, NEP, 2020): Theory & Practical.

Programme Outcome:

This course is designed to give a learner the fundamental understanding of the diversity of Phylum Chordata with emphasis on their origin, key characteristics, classification, distribution, and function. This course will make the students enlightened with the concept of diversity, organization, adaptation, and taxonomic status of Chordates. The course will give an understanding of the systemic physiology of chordates. There will be a discussion about the affinities of chordates to different groups.

Course Outcome:

1.The students will get knowledge to explain the diversity of Protochordates and chordates.
2.Identify the taxonomic position of chordates, their diversity, and their distribution.
3.Gain insights about economic importance and significance Pieces and Pisciculture.
4.Identify and distinguish between poisonous and non-poisonous snakes by observing characteristic features.
5.Students gain knowledge about the composition and significance of venom. 6. Gain insights About The Structural specialties of birds which will help them for Poultry (commercial application).
6.Adaptive radiation of Mammals: Will give the insight into diversity.

ZOOL2051: SEC (SERICULTURE) CCFUP, NEP, 2020): Theory & Practical.

Programme Outcome of the Skill Enhancement Course (SEC):

1.The syllabus for Sericulture at undergraduate SEC according to NEP has been framed.
2.The main objective of framing this new syllabus is to give the students a proper understanding of Sericulture.
3.Students will get knowledge about mulberry plant cultivation, different silkworms, culture techniques, silk production, and the knowledge of diseases and enemies of silkworms.
4. The students can be utilized the knowledge in starting their own enterprise after completion of the course.

Course Outcomes:

1. Get Complete Knowledge of Silkworms and their different types.

2. Get knowledge about technology of silkworm culture and making of silk.
3. To know about different diseases or Enemies of silkworms.
4.Get a Brief Idea about entrepreneurship in Sericulture.

ZOOL2051: SEC (SERICULTURE) CCFUP, NEP, 2020): Theory & Practical.

Programme Outcome: The course will impart basic knowledge of the ornamental fish industry and inculcate its scope as an avenue for career development as an entrepreneur or as an aquari-culturist.

1. Students will be able to know the fundamentals of aquarium fish industry.
2. Students will understand the biological features of aquarium fishes.
3. Student will get to know the food and feeding habits of aquarium aquarium fishes.
4. Student will get aware about the transportation of Fish
5. Students will have 'hands-on' experience through exposure to technology, production, functioning, operation of an aquarium in the ornamental fish farms, hatcheries, and fish feed production plant as study tours or field visits.

Course Outcomes:

1. Know about Basic needs to setup an aquarium, i.e., dechlorinated water reflector, filters, scavenger, aquatic plants etc. and the ways to make it cost-effective.
2. Manage fish diseases.
3. Prepare the proper dosage of different kinds of natural and synthetic fish feed.
4. Develop Personal Skills In the Maintenance of Aquarium.
5. Become aware of Aquarium as commercial, decorative items and of scientific values.