HISTORY

The department of Zoology is one of the science departments of New Government Degree College for Women, Golconda established in 2015, it had the rare privilege of becoming the first science department of the college. The college is now affiliated to the Osmania University, Hyderabad. Right from 2015, the department offered a 3-year undergraduate program in Zoology with Botany and Chemistry as subsidiary subjects. The course was modeled on the annual evaluation system and the instruction was tailored to address the learning objectives defined in the syllabus. With the introduction of a choice based credit system, the department moved to a more flexible and innovative space in terms of the form and content of the program from 2016 onwards. The new program is structured on a semester basis which runs through 3 years from the entry-level.

VISION

❖ To facilitate women’s access to the domain of scientific knowledge to contribute significantly to the dissemination of new knowledge in the discipline of Zoology by providing a strong foundation.

❖ To provide practical skills and knowledge which can pave for self- employment for women in Sericulture, Vermiculture & Apiculture.

❖ To inculcate critical thinking, group discussions, analytical skills to enable me to pursue higher studies and research in Life sciences, Forensic sciences related to the field of zoology.

❖ To create human resources in the region properly equipped and trained strictly in adherence to the language of the discipline of Zoology.

❖ Inculcate high values through a liberal education

❖ Promote research and learning at the UG level and beyond.
MISSION

The goals of the mission are well defined and synchronized with its vision.

- To stimulate the propensity of the women in the region to imbibe the spirit of knowledge
- To provide space for appropriate pedagogy to inculcate the knowledge of the discipline and the human values
- To offer academic programmes at undergraduate and postgraduate levels in the discipline of Zoology.
- To strengthen the drive for moving towards the frontier knowledge of the discipline of Zoology.
- To move beyond academics to provide leadership for community-centered activities in the region.

ACADEMIC PROGRAMMES

BACHELOR OF SCIENCE IN ZOOLOGY

- The academic program at the undergraduate level with Zoology as major and Botany and Chemistry as minor (subsidiaries) lead to the bachelor of science in zoology. It is a 3 years program with (CBCS) choice based credit system.

PROGRAMME AND MEDIUM OF INSTRUCTION.

- B.Sc (BZC)., E/M & U/M.

The Core Papers (Old system)-2015-2018 (First batch students)- Annual exam pattern.

- Paper I- Biology of Invertebrates, Cell Biology, and Biomolecules.
- Paper II-Biology of vertebrates, Embryology, and Zoogeography.
- Paper III-Animal physiology, Genetics& Evolution.
- Paper IV-Aquaculture, Clinical science and applied biology.
The Core Papers (New CBCS System)-2016-2018 (Semester system).

- Semester I – Animal diversity- Invertebrates.
- Semester II – Ecology, Zoogeography, and Animal behavior.
- Semester III – Animal diversity- Vertebrates and Developmental Biology.
- Semester IV – Cell Biology, Genetics & Evolution.
- Semester V (DSC) – Physiology and Biochemistry.
  Semester V (DSE) – I(A)- Applied Biology
  I(B)- Entomology.
  I(C)- Sericulture. (This course is opted by the Department.)
- Semester VI (DSC) – Immunology and Biotechnology.
  Semester V (DSE) – II(A)- Aquatic Biology
  II(B)- Public health and Hygiene. (This course is opted by the department.
  II(C)- Poultry Science.

The Core Papers (New CBCS System)-2019-2020 (Semester system).

- Semester I – Animal diversity- Invertebrates.
- Semester I – Animal diversity- Vertebrates.
- Semester III – Cell Biology, Genetics, Evolution, and Zoogeography.
- Semester IV – Cell Biology, Genetics & Evolution.
COURSE OUTCOMES OF ZOOLOGY

I-YEAR SEMESTER- I
TITLE: ANIMAL DIVERSITY-INVERTEBRATES CODE: BS105: CT: DSC 2A
On completion of the courses, students will be able
CO1- Classify Phylum Porifera with taxonomic Keys
CO2- Recognize the ecological role of Phylum Protozoa, Porifera & Helminthes
CO3- Identify the given Mollusca with respect to the economic importance
CO4- List characteristics of Arthropoda
CO5- Create a model of pearl formation
CO6- Practice labeling diagrams

I –YEAR SEMESTER- II
TITLE: ECOLOGY, ZOOGEOGRAPHY AND ANIMAL BEHAVIOR CODE: BS205
On completion of the courses students will be able:
CO1-To Describe Environmental Pollution and its control measures
CO2- To understand methods of wildlife and conservation and endangered species
CO3-To describe Innate and Acquired types of behavior
CO4- To identify Zoogeographical regions with their climatic and faunal peculiarities

II YEAR SEMESTER-III
TITLE: ANIMAL DIVERSITY-VERTEBRATES AND DEVELOPMENTAL BIOLOGY
CODE: BS305

On completion of the courses students will be able:

CO1-Give examples of Amphibia and its parental care
CO2-Describe the Phylum Mammalian and its aquatic adaptations
CO3-Differentiate poisonous and non-poisonous snakes
CO4- Illustrate Flight adaptation in birds
CO5- Analyze different types of fetal membranes
CO6-To identify the characters of Amphibia and its parental care
II- YEAR SEMESTER- IV
TITLE: CELL BIOLOGY, GENETICS & EVOLUTION CODE: BS405
On completion of the courses students will be able:

CO1- Identify the primary components of the cell’s cytoskeleton & their role in the shape & function of the cell.
CO2- Differentiate prokaryotes & Eukaryotes.
CO3- Explain causes and role of extinction in evolution
CO4- Identify chromosomal mutations and inborn errors of metabolism
CO5- Compare Darwinism & Lamarckism.

III YEAR - SEMESTER-V
TITLE: PHYSIOLOGY AND BIOCHEMISTRY
On completion of the courses students will be able:

CO1- Describe the types of Digestion
CO2- Compare process of carbohydrates, protein, lipid digestion
CO3- Discuss structure of mammalian lungs and the process of gaseous exchange
CO4- Show the mammalian heart and its functioning
CO5- Justify animal classification on the basis of excretion of nitrogenous waste products
CO6- Write Sliding Filament theory of muscle contraction
CO7- Neuron structure, Types of neurons and Propagation of nerve impulse.
CO8- Endocrine glands and diseases associated with hypo and hyper secretions.
CO9- Homeostasis mechanism.
C10- Carbohydrates, Proteins, Lipids classification, Functions, and their metabolism.

III-YEAR- SEMESTER-V - DSE I(C)-
TITLE: SERICULTURE
On completion of the courses students will be able:

CO1- Sericulture Status in India, CSRTI institutes in India.
CO2- Different types of silkworms and silk.
CO3- Silkworm rearing, rearing appliances.
CO4- Silkworm diseases and controlling measures
CO5- Mulberry cultivation and diseases of the mulberry plant.
CO6- Commercial characteristics of cocoon and cocoon market.
III YEAR - SEMESTER-VI
TITLE: IMMUNOLOGY AND BIOTECHNOLOGY.

On completion of the courses students will be able:

CO1- Immunity and Types of Immunity.
CO2- Organs and cells of the Immune system.
CO3- Immunoglobulins types and MCB’S production.
CO4- Vaccines and types.
CO5- Importance of Biotechnology and its applications
CO6- Gene cloning and Cloning vectors.
Co7- Stem cells and their applications.
CO-8- Transgenesis and its applications.

III YEAR - SEMESTER-VI -DSE-II (B)
TITLE: PUBLIC HEALTH AND HYGIENE.

On completion of the courses students will be able:

CO1- Health and Nutrition.
CO2- Diseases associated with malnutrition and undernutrition.
CO3- Various Industrial and occupational disorders.
CO4- Diseases and controlling measures.
CO5- Child labour Act
CO6- Medical termination of Pregnancy Act
Co7- Proper disposal of medical and solid wastes.

PROGRAMME AND MEDIUM OF INSTRUCTION.

❖ B.Sc (BZC)., E/M & U/M.

The NUMBER OF TEACHING POSTS:

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**DR. N. THULASI**

**LIST OF PAPERS PUBLISHED:**


**NATIONAL/INTERNATIONAL/STATE SEMINARS/CONFERENCES ATTENDED**

1. Dr.N.Thulasi has attended the “104th Indian Science Congress” on “Science and Technology for National Development” in the month of January-2017, organized by Sri Venkateswara University, Tirupati, AP. Which was inaugurated by our hon’ble Prime Minister Narendra Modi.


TRAINING PROGRAMMES ATTENDED


2. Attended one day workshop on e-content development on 28-03-2018 at IPGDC(W), NAMPALLY, Hyderabad.

3. Attended a one-month Orientation Training Programme conducted at MGNCRE, Hyderabad from 01-11-2018 to 30-11-2018.

4. Attended as JIGNASA evaluator on 7th and 8th January 2019 at RUSA center, Hyderabad.


6. Attended a two-day orientation training programme on Contributor Personality Training at Vivekananda Institute of Human Excellence on 26-03-2019.

7. Attended two days National Workshop on Accreditation Quality Improvement and Ranking in Higher Education Road Map-Ahead organized by TSCHE, CCE, RUSA on July 8th and 9th, 2019.

TEACHING METHODS ADOPTED TO IMPROVE STUDENT LEARNING

- Innovative Methods i.e., PowerPoint Presentation, etc.
- Some of the teaching methods that are adopted to enhance student learning by the zoology department are Bio-visual charts, Models, Slides, Specimens.
- PPTs, Smartboards, LCD Projector, Videos.
- Students Seminar, Group discussions, Quiz programmes.
- Guest lectures by subject experts.
- Students study projects through the JIGNASA programme to create an interest in research.
- Attending MANA TV topics delivered by subject experts and students.
- Remedial classes for weak students.
- Field trips

LAB INFRASTRUCTURE

Department of Zoology is well equipped with one Laboratory facilities for all I, II & III BZC students. An array of Museum specimens is the highlight of the Department.

- Museum specimens
- Models
- Specimens
- Glassware
- pH Meter
- Colorimeter
- Dissection trays
- Histology Slides
- Binocular Microscopes
- Simple Microscopes
- Glassware
- Biovisual charts

Learning Resources

- Departmental library

ICT Resources

- 1 Desktop with Wi-Fi connection

Others

- Teaching kits
## STUDENTS STUDY PROJECTS.

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<td>‘WATER ANALYSIS- DETERMINATION OF PH AND ESTIMATION OF DISSOLVED OXYGEN CONTENT</td>
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<td>4</td>
<td>2018-19</td>
<td>III B.z.c. E.M</td>
<td>“BLOOD GROUPS – A STATISTICAL ANALYSIS IN MALES AND FEMALES”.</td>
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<td>5</td>
<td>2018-19</td>
<td>I  B.z.c. E.M</td>
<td>“URINALYSIS- A DIAGNOSTIC TOOL FOR DIABETES MILETUS- STATISTICAL ANALYSIS IN MALES AND FEMALES”.</td>
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<td>6</td>
<td>2019-2020</td>
<td>III B.Z.C E.M.</td>
<td>“DETECTION OF ADULTERANTS IN COMMON FOOD STUFFS-SPICES POWDER (CHILLI, CORIANDER, AND TURMERIC POWDER), MILK AND SUGAR BY CHEMICAL METHODS”.</td>
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PHOTO GALLERY

ACTIVITIES OF THE DEPARTMENT OF ZOOLOGY.

STUDENT SEMINARS & GROUP PRESENTATION
DEPARTMENT OF ZOOLOGY

RESULT ANALYSIS-2018-2019

Result Analysis-2018-2019
Semesters- I, III & V.

Result analysis-2018-2019
Semesters-II, IV &VI
RESULT ANALYSIS-2017-2018

Result Analysis-2017-2018
Semesters-I&III
semesters- II&IV


Result Analysis-2016-2017
Semesters- I &II

FUTURE PLAN

Upgradation of the existing lab with few types of equipment and materials.

- Upgrading the curriculum with more activities to enhance teaching and learning.
▶ Planning to establish a PG course in Zoology.
▶ Motivating the students towards research in Higher Education.
▶ Providing more employability chances to science students.