

**DEPARTMENT OF ANIMAL SCIENCE**  
**SCHOOL OF LIFE SCIENCES**  
**BHARATHIDASAN UNIVERSITY,**  
**TIRUCHIRAPPALLI - 620 024**

PhD Programme (Program Code: PHDZOO)  
PhD Course Work Syllabus  
Academic year 2017-2018 onwards

**General Objectives:**

- Students will learn the currently accepted theories in broad aspects of biology
- Train the students how to design, conduct and critically evaluate experiments
- Train the students to learn how to make an original contribution to science
- Train the students to become skilled in oral and written communication

**Program Specific Objective:**

- Train the students to understand the methods/statistics, and two major areas of research in depth complex biological content and concepts at the cellular and molecular level.
- Train the students to think critically, and develop and test the hypothesis
- Train the students in researching the scientific literature and for using informatics programs associated with molecular biology and/or their fields of interest.
- Gain the knowledge of the Ethical Use of Living Organisms in Research
- They will learn to integrate scientific, biological knowledge within a social, political and/or historical context while recognizing both the potential and limitations of scientific application.

**Program Outcome:**

- Self-directed learning and evaluate acquired knowledge across a broad range of modern Zoology.
- Logically solve the scientific problem in the context of biological process
- Describe the principles, mechanism and applications of basic and modern equipments
- Learn and apply the ethics of animal usage
- Enhance the ability of writing research project activities, problem-solving and communications.
- Design and carried out a research project.
- Students will be able to implement the knowledge, skills and values of biological sciences into occupational pursuits, making them attractive candidates in today's job market.

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<b>S.No.</b>	<b>Course &amp; Credit</b>	<b>Title of the Course</b>	<b>Course Code</b>
1	Course-I ; Credit -- 4	Research Methodology	17ASPHD01
2	Course-II (Any Two)  Credit --4	Animal Behaviour	17ASPHD02
3		Neurobiology	17ASPHD03
4		Fish Nutrition and Feed Technology	17ASPHD04
5		Aquaculture Biotechnology	17ASPHD05
6		Microbiology and Fish Pathology	17ASPHD06
7		Microbial Genomics and Probiotics	17ASPHD07
8		Phytochemistry and Pharmaceutical Technology	17ASPHD08
9		Nanobiotechnology	17ASPHD09
10		Cancer Biology	17ASPHD10
11		Infertility Management	17ASPHD11
12		Stem Cells and Regenerative Medicine	17ASPHD12
13		Molecular Biology of Reproduction	17ASPHD13
14		Pheromone Technology	17ASPHD14
15		Proteomics and Genomics	17ASPHD15
16		Biosensors	17ASPHD16
17		Reproductive Endocrinology	17ASPHD17
18		Biology of Crocodilia	17ASPHD18
19		Biochemistry of Signal Transduction	17ASPHD19
20		Cellular and Molecular Neuroscience	17ASPHD20
21		Animal Cell Culture	17ASPHD21
22		Oxidative Stress Biology	17ASPHD22