हिमाचल प्रदेश केंद्रीय विश्वविद्यालय

Central University of Himachal Pradesh

(Established under Central Universities Act 2009)

शैक्षणिक खण्ड, शाहपुर, ज़िला काँगड़ा, हिमाचल प्रदेश - 176206

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CENTRAL UNIVERSITY OF HIMACHAL PRADESH

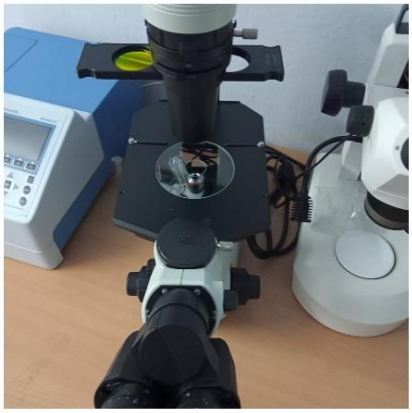
The Central University of Himachal Pradesh is established under the Central Universities Act 2009 (No. 25 of 2009) enacted by the Parliament. The University is funded and regulated by the University Grants Commission (UGC). The Central University of Himachal Pradesh is a premier institution for inclusive access to excellence in higher education and research to emerge as premier University of the country at par with the best Universities of the World.

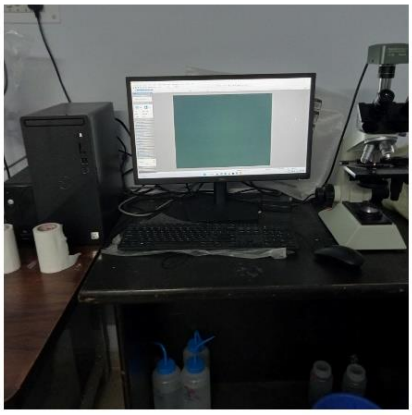
ABOUT DEPARTMENT OF ANIMAL SCIENCE

The Department of Animal Science at Central University of Himachal Pradesh was started in 2017. Presently department is offering M.Sc. and Ph.D. in Zoology. It offers education and research in entomology, vector borne diseases, fisheries, toxicology, cancer, microbiology, and emerging hill zoonotic diseases. The department is supported by well experienced and qualified faculty and technical staff. The department is actively involved in extension activities, conducting training programs, and serving as subject matter specialist.

GLIMPSES OF FACILITIES AVAILABLE AT DEPARTMENT OF ANIMAL SCIENCE

Department facilitates both *In Vivo* and *In Vitro* experimentation with high end instruments and well experienced staff. Laboratories maintained in department are Molecular Biology Lab., Tissue Culture Lab., and Zoology Lab.





List of Instruments available in the Department of Animal Science

Sr. No.	Item	Location of Storage (Room No.)
1.	Autoclave Vertical Double Wall	205
2.	Autoclave Vertical Digital	114
3.	AC 1.5 Ton (Hot & Cold)	114
4.	AC 1.5 Ton (Hot & Cold)	205 A
5.	AC 1.5 Ton (Hot & Cold)	314 (Animal House)
6.	AC 1.5 Ton (Hot & Cold)	205
7.	BOD Cooling Incubator	205 A
8.	BOD Incubator	114
9.	Calorimeter	205
10.	Centrifuge Machine (Non-Refrigerated) 02 ml	205
11.	Centrifuge Machine (Non-Refrigerated) 15 ml	205
12.	Digital Dissolved Oxygen Meter	205 A
13.	Elisa Plate Reader	205 A
14.	Gel Documentation System	205 A
15.	Hot Air Oven Double Wall	205
16.	Hot Plate Round Dia 20cm	205
17.	Incubator	205
18.	Laminar Air Flow Horizontal (Stainless Steel)	205
19.	LED Smart TV 55 Inch	205
20.	Magnetic Stirrer with Hot Plate (Digital)	205
21.	Milli Q Water Purification System	205
22.	Microtome	205
23.	Microwave Oven	205
24.	Microprocessor PH- EC-TDS meter	205 A
25.	Micro Centrifuge	205 A
26.	Online UPS 1 KVA for Spectrophotometer	205 A

27.	Online UPS 3 KVA	114
28.	Online UPS 5 KVA for Molecular Lab	205 A
29.	PCR System	205 A
30.	Refrigerator Double Door	205
31.	Rocker Shaker	205
32.	Spectrophotometer UV Vis Double Beam 180	205 A
33.	Spectrophotometer UV Vis Double Beam 150	205 A
34.	Trinocular Microscope	205 A
35.	Trinocular Microscope with Image Analyzer Camera with Software and Desktop Computer	205 A
36.	Microscope Trinocular Inverted	205 A
37.	Trinocular Stereo zoom Microscope	205 A
38.	Vortex Shaker	205
39.	Weighing Balance Digital (Micro)	205
40.	Weighing Balance Digital (Macro)	205
41.	Water Bath	205
42.	Deep Freezer	205
43.	Refrigerated Centrifuge	205
44.	Soxhalet Appratus	205
45.	Tripple Distillation Unit	205
46.	Xerox Machine	205
47.	Microtome semiautomatic with water bath	205
48.	Tissue Homogenizer	205 A
49.	Sonicator	205

Internship training programme

in

Department of Animal Science (Zoology)

Central University of Himachal Pradesh, Dharamshala

Programme 1

(Entomology based applied courses including apiculture, sericulture and IPM etc.)

- Diagnosis of insect pest incidence in different crops
- Collection and preservation of insects
- Identification of agricultural insect pests, insects of medical importance, forensic insects, and other beneficial insects
- Study on Insect vectors and vector-borne diseases
- Preparation of permanent mounts
- Microscopy and morphometry of different insects
- Bio-ecology/life cycle of different harmful and beneficial insects
- Isolation of insect DNA
- Phylogenetic, structural, and docking analysis

Programme 2

(Aquaculture based applied courses including limnology, aquatic toxicology, and fish physiology)

- Analysis of various water quality parameters water temperature, pH, Total dissolved
- solids, Turbidity, Electrical conductivity, Alkalinity, Dissolved oxygen, Biological
- oxygen demand, Free CO 2, Total Hardness, Calcium and Magnesium ion, etc.
- Hydrological Analysis of rivers (Discharge by area slope method and water velocity)
- Planktons and benthos collection, preservation, and analysis
- Collection and Identification of different endemic and exotic fish species through
- Biometric analysis
- Estimation of heavy metals from Water, Sediments and Fish tissue

- Determination of fecundity and Oocyte diameter
- Isolation of DNA/RNA and PCR
- Preparation and maintenance of aquarium and Pond construction
- Hatchery design and Induced breeding
- Toxicological studies using zebra fish as study model

Programme 3

(Molecular Biology including cancer research, heavy metal toxicity and diabetic research)

- Etiology of breast cancer and cellular changes in cancer.
- Remedial measure of breast cancer through different novel compounds.
- Research on immunological parameters expressed in cancer.
- Cellular and sub-cellular changes observed in cancer.
- Research on hormonal and tumor markers expression in cancer.
- Research on role of cytogenetics in biomedical research.
- DNA fragmentation studies in co-relation with disease.
- Estimation of heavy metal in water samples.
- Research on anti-diabetic potential of Himalayan medicinal plant.

Programme 4

(Microbiology based research: bioremediation and water quality research)

- Isolation and identification techniques involved in microbiology.
- Water contamination due to *E. coli* and coliform.
- Heavy metal remedial measures using microbes.
- Plasmid and genomic DNA isolation techniques from microbes.