



Utkal University
Bhubaneswar 751004, Odisha

3.1.5. Institution has the following facilities to support research:

3.1.5. Institution has the following facilities to support research:

1. Central Instrumentation Centre

In order to undertake and promote quality research in the University infrastructural and instrumental facilities have been developed in various Departments, Centre of Excellences (CoEs) and a dedicated Central Instrumentation Facility (CIF).

The Departments under science stream are provided with adequate space for research laboratories with basic infrastructure. Required instrumental facilities have been developed in each Department utilizing funds received from different sources. Specific facilities for computational and data science, agricultural, biomedical science and interdisciplinary research involving physical and chemical sciences have also been developed in the campus for research purpose. The University focuses more on interdisciplinary research involving all the related Departments.

The University has also established 11 Centre of Excellences, supported under RUSA (Rastriya Uchhatar Shiksha Abhiyan) and WB-OHEPEE (Odisha Higher Education Programmed for Equity & Excellence) to strengthen the research infrastructure of the University and carrying out interdisciplinary research.

At University level, a separate three storied building has been constructed as Central Instrumental Facility (CIF) to house high end equipments and establish state-of-art facility for cutting edge research works. Several facilities are already developed in University Departments and CoEs. Process has already been initiated to procure several high-end equipments in the CIF. The following instrumental facilities available in different departments are extensively used by faculties, research scholars, students of the University as and when required.

- Micro Raman Spectrometer
- Electrophoresis system,
- ELISA readers
- ChemiDoc
- UV-VIS Spectrophotometers with/without DRS,
- Fluorescence Spectrophotometers
- Research Microscopes
- Gradient and Real Time PCR
- HPLC
- Fluorescence Microscope
- Milli-Q Water Purification System
- Thermal Analyzer (TG-DSC)
- FT-IR spectrometer
- Electrochemical Analyser
- X-ray Diffractometer
- Impedance Analyzer
- Atomic absorption spectrophotometer
- Phase-Contrast Microscopes
- Stereo zoom Microscope
- Ultra-Centrifuges

- Sonicator
- Cell and Tissue culture facility
- Refrigerators and freezers

Utkal University has 27 Regular Academic Departments equipped with Smart Class rooms, student common room, libraries, video conference facilities, etc. The Science Departments are also facilitated with well-equipped laboratories for both academic and research purpose, as per the norms of UGC and OSHEC. Classrooms are well furnished and ventilated. Audio-visual room is provided with all teaching aids, OHP, Slide Projector, Television, Video Player, LCD Projector, Video Camera, Still Camera, DVD, Multimedia Computer, Audio Systems, Microscopic Projector, Internet connections, etc., in order to ensure overall development of students. The University recently developed 11 Centre of Excellences supported by RUSA and WB-OHEPEE, to strengthen the research infrastructure of the University.

The Research facilities at the Central Instrumental Facility (CIF) at Utkal University





2. Green House

Green house and Glass house facility in Department of Botany, Utkal University

- A **612 sq. ft. (34 x 18 ft.)** green house and a **256 sq. ft. (16 x 16 ft.)** glass house is located inside the building of Department of Botany, Utkal University.
- The green house and glass house is a chamber with transparent roof where plants are grown in requiring regulated climatic conditions.
- Several crop plants, cereal plants, medicinal plants have been maintained inside the green house and glass house for optimum growth useful for research purpose.
- An extensive collection of about 50 varieties of banana collected from different parts of Odisha and India including North-East India has been maintained inside the green house.



The Hydroponic facility at the Department of Agri-Business

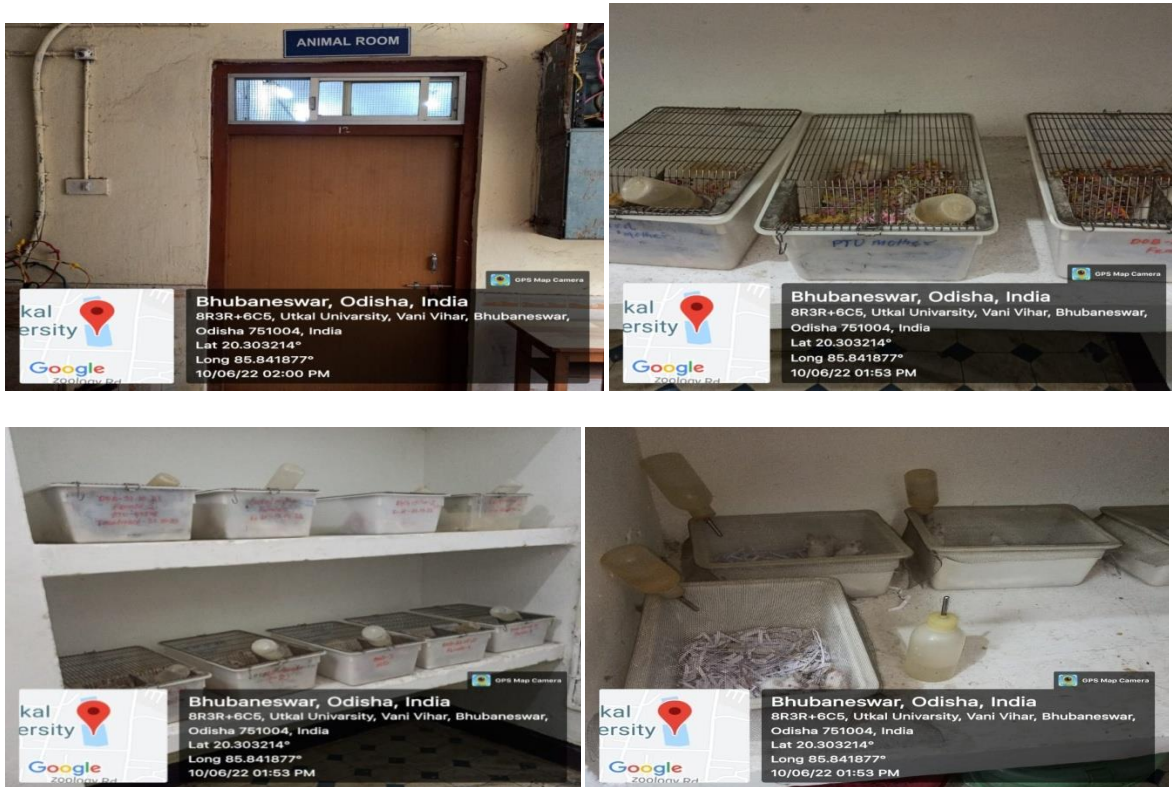


The Green House Facility at Utkal University

3. Animal House

Established in June, 1990, the Animal House Facility of the Utkal University caters the teaching and research needs of the Department of Zoology, Department of Biotechnology and University Department of Pharmaceutical Sciences. It is designed to supplement teaching, training, and research capabilities while also meeting the expanding need for high-quality laboratory animals. The animal house is air conditioned and well protected against environment contamination. It is maintained by a team comprising teaching staff members, technical assistant and animal house attendant. The support staff ensures the feeding, watering, restraining, cage cleaning, record keeping and ordering of animals, feeds and bedding materials. Periodic health monitoring of the animals is carried out to ascertain the health status of the animals. The Animal House is registered with the Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA), Ministry of Environment, Forests, and Climate change, Government of India (Reg. No 192/GO/Re/S/2000/CPCSEA) and has an established and approved Institutional Animal Ethics Committee (IAEC).

Area (Animal House): Ground floor: 300 sq. ft.
Animal Species: Rat, Mice, Guinea pig, Rabbit.



4. Museum

Department of Anthropology , Utkal University

The Post-Graduate Department of Anthropology is one of the oldest departments of the Utkal University, Bhubaneswar established in the year 1958. This Department started functioning in two residential quarters in 1958 and it was founded and headed by an eminent museologist Prof. A. Aiyappan, Former Director of Madras Museum. Professor Aiyappan established a museum in the department in the year 1962 by collecting Anthropological specimens focussing initially on material culture of the tribal communities of Odisha.

The Cultural Museum of the Department has been divided into different sections like hunting, fishing, agricultural implements, dress, ornaments and other household articles of tribal communities of Odisha have been displayed. The Department Museum has been established in view of academic purpose to impart practical training to the Anthropology students with the help of museum specimens and also utilize them for various fields of researches. This Anthropological Museum in Utkal University is one of Departmental University Museums of India which is open to public on every working day. This Anthropological Museum, in its beginning was established

in a small way now it has developed and innovated to a well-organized museum. It has grown through gifts, donations, purchases and fieldwork expeditions and visit to different areas.

The sections in this museum are well arranged following the principles of display and arrangements in Museology. Every section has great educative value in their own rights of collection and display. The Cultural Museum has collection more than 1100 specimens of different categories, different materials from different ethnic groups group of Odisha. Besides specimens from Odisha, it also has few collections from outside the state. Altogether 482 numbers of specimens have been displayed in the museum and rest collections are preserved in the museum storage.

Every year a large number of school and college students and general public including faculty members and scholars of our own university and other universities and different colleges, visit the museum in special occasions like exhibitions opened in foundation day of the department and workshop's and seminar's conducted. Though the museum is small, but it is a repository of many unique ethnographic specimens collected from Odisha in particular and Eastern India in general. Enriched with a large number of valuable collections it functions as an aid to impart education in Anthropology and extends immense help to the scholars in anthropological, ethnographic and ethno archaeological researches. Obviously it collects cultural material and exhibits them with principles and methods of museology.

Cultural Museum, Dept. of Anthropology



Cultural Museum, Dept. of Anthropology



Galleries dedicated to Dhokra craft



Hunting and Fishing Implements Galleries



Press meet of the Workshop on Skeletal Remains in Departments' Cultural Museum



School Students visiting the Cultural Museum



Prof. Jens Seeberg from the Department of Anthropology, Aarhus University, Denmark visiting the Cultural Museum.



Prof. Jonathan Mark Kenoyer, University of Wisconsin, Madison visiting the Cultural Museum.

Prehistoric Archaeological laboratory-cum-museum

The specialization of Prehistoric Archaeology at Utkal University was started in the department of Anthropology in the year 1975 by Prof Krushna Chandra Tripathy. His immense interest in Prehistoric Archaeology inspired him to start the specialization of Prehistoric archaeology and establish Prehistoric Archaeological Laboratory cum Museum. Since its inception every year student of this specialization explores new prehistoric sites and collect numbers of stone tools for their study. Prehistoric Archaeology Laboratory has at present more than three thousand tools collections which are stored in the Laboratory cum Museum. The Museum has collection from different sites from almost every part of the state of Odisha. The collections which are present in the museum are from Angul, Bargarh, Dhenkanal, Keonjhar, Khurdha, Mayurbhanj, Puri, Sundargarh, and Southern Odisha. Some of the important sites whose collections were preserved in the Museum are Burhabalang valley (Mayurbhanj), Brahmani Valley (Dhenkanal), Sankerjang, Kerjang (Angul) Ardhei River Valley (Keonjhar), Rushikulya valley (Ganjam), Bang (Puri). The stone tools preserved belong to different cultural periods including Palaeolithic, Mesolithic, Neolithic, Chalcolithic and Iron Age culture. The site of Bang has not only yielded stone tools, pottery but also Three Human skeletons of Chalcolithic period preserved in the Cultural Museum of the Department.

General view of the Prehistoric Archaeological Laboratory cum Museum at the department of Anthropology



Students learning about the Stone tool measurement.



Teaching the students about how to prepare a Stone tool (Experimental Archaeology).



A Handaxe preserved in the Prehistoric Archaeological Laboratory cum Museum



Mesolithic stone tools preserved in the Prehistoric Archaeological Laboratory cum Museum



Neolithic stone tools preserved in the Prehistoric Archaeological Laboratory cum Museum

Museum, Department of AIHC&A:

The Museum of P.G Department of Ancient Indian History, Culture and Archaeology is small one but some rich collections are there. The images and antiquities of the Museum are collected by the teachers and research scholars of the Department. It was properly arranged and display in Gallery after 2014. The images found from Lalitagiri while conducting a trial excavation by Prof. K.S. Behera in 1977 is being display in the Museum. The antiquities found from Excavation at Narisho, which was conducted by the Department under Prof. S. Pradhan also display, besides this many other antiquities collected by Individual teachers are also display which include the Palaeolithic, Mesolithic, Neolithic Tools, potteries etc. This Museum is partially fulfilled the practical aspect of the students and researchers of the Department.



A general view of the Museum at the Department of AIHC&A



Museum, Department of Zoology :

The museum of the Department of Zoology was established in 1960 with a few samples brought to the museum through field trips carried out by the staff of the Department. The bulk of the museum samples of insects, invertebrates, fish, amphibians, birds and mammals were collected through organizing field trips by the department to collect samples of field studies carried out by students of the department over time. The specimens were scientifically arranged and classified to facilitate the work of researchers and students in studying the types of animals found in the region and state. There are about 600 different kinds of exhibits in the museum.

The basic objective of the is Museum is to acquaint the students and the visitors of the diversity of animals, identification and importance of species and need for conservation initiatives and to provide the referral place for the reference samples (Prototype) of different animal wildtypes and the conservation of samples used in scientific projects (MSc., PhD.) in the department as a reference.

The Department invites the students of nearby schools and colleges to visit the museum. Besides, private visitors, academicians from different institutions and alumni very often visit the department to gain information on different animals. This is a usual practice particularly during celebration of different days related to environment and biodiversity. The Master and research students of the department explain and demonstrate the visitors about the purpose of the museum, diversity and importance of animals, and our individual role in protecting an animal. Awareness generation among all concerned is the primary objective of such initiatives. Over the years, the museum has received hundreds of visitors from diverse backgrounds.

A general view of the Museum at the Department of Zoology



Section of invertebrates, Department of Zoology

A python collected and preserved by research students of the Department



Section of fishes, Dept. of Zoology



Molluscan shells collected by students and a section of mammalian and reptilian skeleton, Dept. of Zoology

5. Media laboratory/Studios

The journey from traditional learning to E learning is definitely a novel adventure for Utkal University. The Virtual Tutorial Project Under Equity Learning, backed and funded by RUSA and Govt. of Odisha, is a welcome step to New Age Learning. Its aim is to prepare Video lectures on common undergraduate syllabus at +3 level in bilingual mode(Odia and English). It has created a platform for establishing learning equity amongst students of Odisha across disciplines and across University through a digital mechanism. The entire project was set up at DDCE , Utkal University in February, 2017 and teachers from various reputed Colleges, Institutes and Universities were roped in to prepare the lectures. The recording process caught momentum since 2018. Till date, more than 4000 hours of lectures have been recorded, out of which around 700 hours of lectures in the core papers of 1st and 2nd Sem of eleven subjects i.e. Physics, Chemistry, Zoology, Botany, Mathematics, Political Science, Sanskrit, Odia, History, English, Psychology, Commerce and Economics have been uploaded on the web portal developed and managed by NIC. The web portal may be accessed

at <https://vtputkal.odisha.gov.in/>. The Lectures have been conducted in bilingual mode so as to make the students conversant with both the languages.

This venture shall benefit the students through anywhere anytime learning. It is also intended to provide supplement to classroom teaching to colleges with inadequate teachers or otherwise.

The department of Anthropology has a photography section dealing with visual account based on the ethnographic studies on tribal and rural communities of Odisha. The photography section is handled by a trained photographer, responsible for collection, compilation, preservation and display of visuals.

6. Business Lab

Under the aegis of RUSA 2.0 (Ministry of Education, GoI), Utkal University, Bhubaneswar, Odisha has set up a business incubator under Utkal Entrepreneurship and Career hub, christened as 'Centre for Innovation and Incubation' (CII) for promotion of startups and creating a thriving ecosystem for entrepreneurship development and innovation. Centre for Innovation & Incubation (CII – Utkal) located in the University campus has started its operation from 1st Sept, 2021.

CII - Utkal has been envisaged to offer a host of services to the budding start-ups ranging from pre incubation, incubation, acceleration, co-working spaces, seed funding, advisory support, mentoring support, market linkage, training and hand holding. Thematically, although the key technology focus areas for CII - Utkal are Agriculture, Food Processing, and allied sectors, it will also incubate and nurture any good Science based innovative idea which has commercial potential.

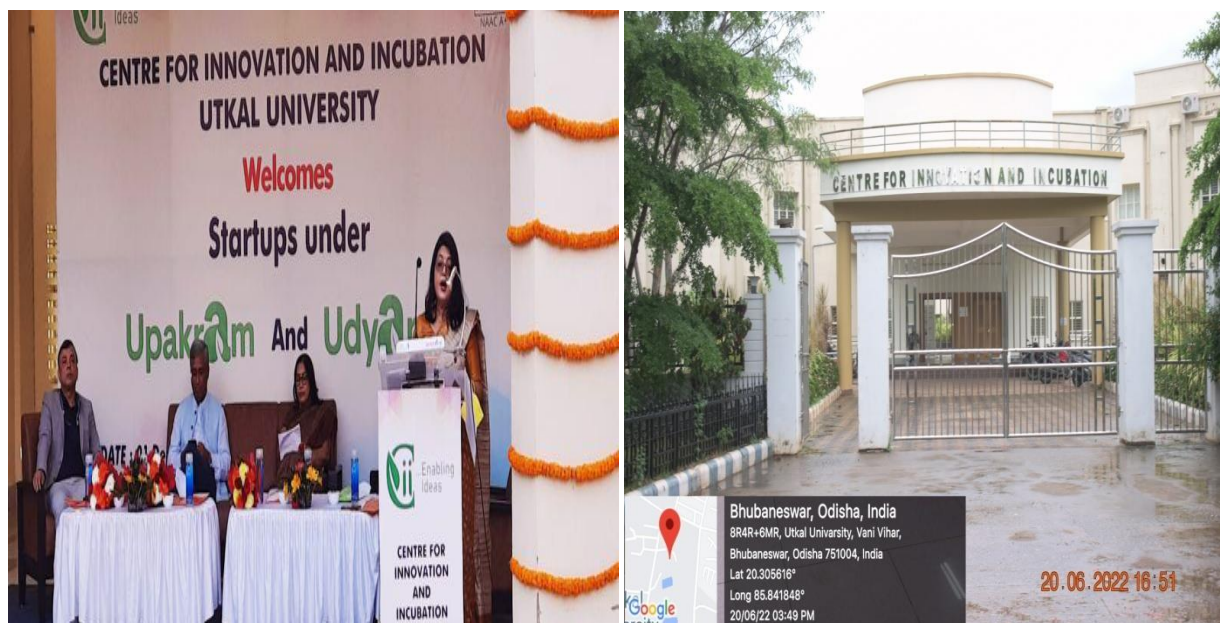
Presently, we have boarded 13 startups under our Udyam Incubation Program. We have also on boarded 5 startups into our Pre Incubation (Upakram) Programme in the month of March, 2022.

In order to provide an impetus on the development of a start-up and entrepreneurial ecosystem in the University, CII - Utkal has launched a Micro Garage for all the students of the university wherein students having entrepreneurial ideas are encouraged to come and discuss regarding the same with our experts. Through this, we have been able to **on board 15 student startups** from the different departments of the University. Along with this, we are in the process of conducting seminars in all the departments of University so that interested students with ideas can be scouted in an efficient manner.

CII-Utkal has forged collaborations with more than 15 private and government institutions for promoting and nurturing startups of different domains. These collaborations have been made to provide online and offline services to the on boarded startups and students on verticals like law, finance, product development, pitch presentation, investment connect, banking services et al.

In order to provide the startups with thematic as well as overall guidance, CII-Utkal has assimilated a pool of highly experienced and professional pool of experts and advisors. The mentors and the advisors have been chosen based on the industry experience and thematic expertise which will facilitate in scaling up of the startups through proper mentoring and networking.

Centre for Innovation and Incubation' (CII)



Activities undertaken by the Business Lab, CII

7. Research/Statistical Databases

In order to undertake and promote quality research in the University infrastructural and instrumental facilities have been developed in various Departments, Centre of Excellences (CoEs) and a dedicated Central Instrumentation Facility (CIF).

The Departments under science stream are provided with adequate space for research laboratories with basic infrastructure. Required instrumental facilities have been developed in each Department utilizing funds received from different sources. Specific facilities for computational and data science, agricultural, biomedical science and interdisciplinary research involving physical and chemical sciences have also been developed in the campus for research purpose. The University focuses more on interdisciplinary research involving all the related Departments.

The University has also established 11 Centre of Excellences, supported under RUSA (Rastriya Uchhatar Shiksha Abhiyan) and WB-OHEPEE (Odisha Higher Education Programme for Equity & Excellence) to strengthen the research infrastructure of the University and carrying out interdisciplinary research.

At University level, a separate three storied building has been constructed as Central Instrumental Facility (CIF) to house high end equipments and establish state-of-art facility for cutting edge research works. Several facilities are already developed in University Departments and CoEs.

8. Moot Court

University Law College is one of the constituent college of Utkal University, Bhubaneswar, Odisha, India. It was established in the year 1975-76. The college is approved by Bar Council of India (BCI) and University Grants Commission (UGC). University Law College offers law courses at the undergraduate level programmes in the field of law such as, Bachelor of Law with Honours [LL.B.(H)] at the three-year and five-year integrated B.A.LL.B. (H) in full time duration.

Every year the University Law College organises State and National Level Moot court Competition and also every year the students of the University Law College participates in the State and National Level Moot Court Competition and bag glories for the college.

A moot court competition simulates a court hearing in which participants analyse a problem, research the relevant laws, prepare written submissions, and present a oral argument. Moot Problems are typically set in areas of law that are unsettled or that have been subject to recent developments.

The procedure imitates that followed in real courts: the judges enters, the mooters and the judges bow to each other, the court master announces the matter, the mooters give their appearance and are then called on in turn to present their submissions, the judges ask questions to the mooters, the court adjourns and the judges then give some feedback.

The Competition comprises of Preliminary Rounds, Quarter Finals, Semi Finals and Finals. The minimum no. of teams that can participate in this competition is limited to 32 teams. Where in the Preliminary Rounds and Quarter Final are been judged by the well-known advocates of District Court and High Court as well as by the Professors of different Law Schools. The Semi Final and Final Round are judged by the sitting as well as the retired Judges of the High Court and Supreme Court.

9. Theatre

The Gandhi Memorial Park (also called as Ahimsh Sthal) at the University campus provides a spacious and open amphitheater that caters to the needs of all extra and co-curricular activities organized on campus by various departments besides hosting University level events.

Prof. Governor Ganeshi Lal, the Governor of Odisha and Chancellor of Utkal University inaugurated the Ahimsa Sthal on October 3, 2019 emphasising the relevance of Gandhian principles towards guiding the youth of the nation and how the University can initiate a program on Peace Studies which has been managed by the Centre for Rural Studies in the new campus.



10. Any other Facility:

Laboratories

The Laboratories of various departments in the University provide state of the Art research facilities with controlled conditions in which scientific and technological research, experiments can be performed. Both the wet lab and dry lab are equipped with fully functional, highly processed instruments and trained lab technicians. The University developed an Air Quality Monitoring Station (AQMS) and Automatic Weather Station (AWS) in the Department of Botany for regular monitoring of air pollution and climate change. The Department of Anthropology has a Biological Anthropology Instrumentation Centre providing facilities for Osteometric, Cytogenetics, Biochemical Genetics, Forensic and Molecular Anthropology research. The Department of Psychology developed University and Child Counselling Centre, Radhanath Rath Centre for Early Childhood Education, Demonstration and Research Centre for Early Education (DARCEE), “SAMARTHYA”, the Disability Unit.

Besides the individual Departmental laboratories the CoEs and the CIF supports

interdisciplinary research work to all the science Departments. University has MoUs with several national institutes for better instrumental and infrastructural support.



Laboratory & Research facilities at the Department of Chemistry



**UV VISIBLE SPECTROPHOTOMETER
WITH MICRO VOLUME CAPACITY**



Lab : Biological Anthropology Laboratory

In the Department of Anthropology, the major scientific equipment are available in the centre are PCR, Transilluminator, microscope, UV-spectrophotometer, Chemical Analyser, PH meter, water bath, Electrophoresis with power pac, Laminar flow, Dry Block heater, Cold and High speed centrifuge, Deep Freezer for storage of DNA, Water Analyser, HaematologyAnalyser, High Power Trinocular Microscope etc. These scientific equipment that have been purchased under the auspices of DSA, Xth and XIth plan and ASIHSS programme of U.G.C and DST-PURSE grant in 2012-14.
