Date: 11.10.2023

APPEAL

3.1.5 Institution has the following facilities to support research: 1. Central Instrumentation Centre 2. Animal House/Green House 3. Museum 4. Media laboratory/Studios 5. Business Lab 6. Research/Statistical Databases 7. Moot court 8. Theatre 9. Art Gallery 10. Any other facility to support research.

This appeal document has been prepared in conformity with the data submitted for DVV and Self Study Report (SSR) of KISS Deemed to be University. This does not contain any new information. This document contains a total number of 41 pages. The data presented in this appeal document is true to the best of my knowledge and belief.

(Dr. Prashanta Kumar Routray)
Registrar, KISS-DU

REGISTRAR
KISS (Deemed to be University)
BHUBANESWAR

3.1.5 KISS-DU has the following facilities to support research:

- Central Instrumentation Centre - January, 2022
- Museum - *Museum of Mankind* - December, 2021
- Media Laboratory - August, 2021
- Business Laboratory - March, 2021
- Research/Statistical Databases
    - SPSS - November, 2018
    - Indiastat Database - February 2022
- Theatre (Amphitheatre) - August, 2018
- Art Gallery - September, 2019

Any other facilities to support research

Special Advanced Research Laboratories:

- Language Laboratory - September, 2018
- Nano Innovation Laboratory - December, 2020
- Research and Ethno-medicine Laboratory - September, 2020

Other Facilities:

- Incubation Centre - March, 2021
- Dark Room - December, 2021
- Medicinal Plant Garden - January, 2022

Our claim for A, i.e. "4 or more," has been modified by DVV to "D," i.e. "1 of the above". The supporting document attached provides details to substantiate our claim. The Peer Team also visited all of the above facilities (geo-tagged photographs, videos and the NAAC Peer Team Visit Schedule attached).

The Peer Team has highlighted some of these facilities:

Three special laboratories have been established for research in the fields of nano-science, indigenous medicines, and indigenous languages. The University focus on IPR, entrepreneurship, and skill development. **Page. 5 line number 5**

The University has labs including media lab, .. and Language lab. **Page. 6 line number 5**

Central Instrumentation Centre

The Central Instrumentation Centre (CIC) was established in January 2022 to provide access to advanced, analytical and high-end research instruments to faculty members, research scholars and underprivileged students at KISS-DU. Currently, the CIC is housed in a 25 ft X 15 ft air-conditioned room. The facility is monitored by the Research and Development Cell, KISS-DU.

The following instruments are available for use without any maintenance charges to the faculty members, research scholars and students who wish to carry out research in niche areas:

 Centrifuge	 **Chest Refrigerator**
 Cooling Centrifuge	 **Automatic Fraction Collection**
 Micropipette Set (0.2-2 ml, 2-20 ml, 20-200 ml, 1000 ml)	 **Ultrasonicator**

UV-Vis spectrophotometer

High-Definition Microscope with Microphotography

Chromatography System for Protein Purification

Real-Time PCR Machine

 Shaker-Incubator	 **Thermal Cycler**
  Upright Refrigerator	 **UV Transillumination Device**

Currently, faculty, scholars and students of KISS-DU are using the above facilities for assays related to nanocomposite materials, food science, DNA extraction, exploring medicinal properties of indigenous plants, etc. Postgraduate students attend demonstrations and hands-on training sessions to learn techniques necessary for a

research career. Faculty members use the above facilities as well to pursue individual intramural research projects. The Central Instrumentation Centre maintains operating hours from 9.00 a.m. to 10:30 p.m. and later, if necessary, by special permission.

Link on Website - Central Instrumentation Centre

Link to - Peer Team Visit to The Central Instrumentation Centre Video

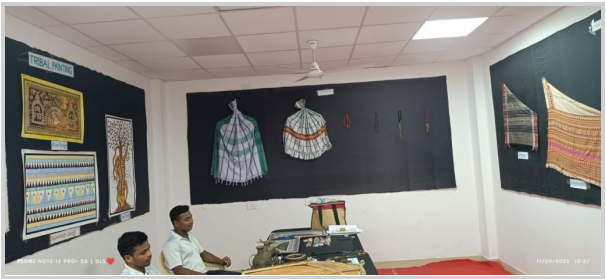
Visit to The Central Instrumentation Centre Photographs

Museum of Mankind

The Museum of Mankind at KISS-DU celebrates the rich heritage of human cultures, focusing on the material culture of indigenous communities in Odisha. Located within the University's campus, this museum is a testament to the diversity of tribal cultural heritage. It has been established in December 2021. It comprises five significant areas, each presenting a vivid canvas of cultural creativity and craftsmanship:

1. **Tribal Jewelry:** This section highlights the intricate and culturally significant jewelry crafted by indigenous communities in Odisha. It showcases the beauty and craftsmanship of these artifacts.
2. **Tribal Hunting & Fishing Equipment:** The museum has a collection of tools and equipment indigenous communities use in their hunting and fishing activities. These offer fascinating insights into the unique lifestyles and resourcefulness of the communities.
3. **Tribal Musical Instruments:** Visitors can explore the melodic traditions of Odisha's indigenous communities through a collection of unique musical instruments. These not only produce enchanting sounds but also hold deep cultural value.
4. **Tribal Textile:** The museum celebrates the textile traditions of indigenous groups in Odisha, using vibrant colors and intricate patterns to narrate riveting stories.
5. **Tribal Painting:** This section curates traditional paintings created by indigenous communities. Each stroke captures the essence of tribal stories, myths, and rituals.

The Museum of Mankind at KISS-DU is more than just a mere collection of cultural artifacts; it embodies the glorious heritage of Odisha's indigenous communities. It serves as a vibrant educational platform, preserving and promoting cultural diversity, fostering cross-cultural appreciation, and honouring the essence of indigenous heritage.

	
Tribal Textile	**Tribal Textile and Tribal Jewellery**

Tribal Musical Instruments

Tribal Musical Instruments & Tribal Hunting & Fishing Equipment

Tribal Painting’

Link to Website - [Museum of Mankind]

Link to - [Peer Team Visit to Museum of Mankind Video]

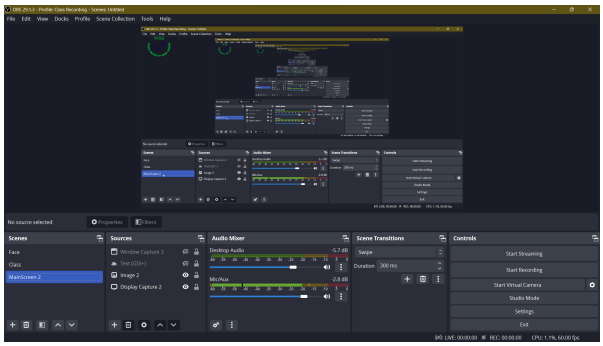
Peer Team Visit to Museum of Mankind Photographs

Media Laboratory

The Media Laboratory at KISS-DU provides cutting-edge technology and new media facilities. It was established in August 2021 with the objective of using ICT for research, dissemination of research and preparation of e-content, including hardware and software solutions.

- Computers/Smart Screens - for recording data and computation
- 3D Printers - for prototyping
- Software -
    - OBS Studio - for recording, live streaming, scene composition, audio mixing and video effects.
    - OpenShot Video Editor - Video Editing, Video Effects, Audi mixing.

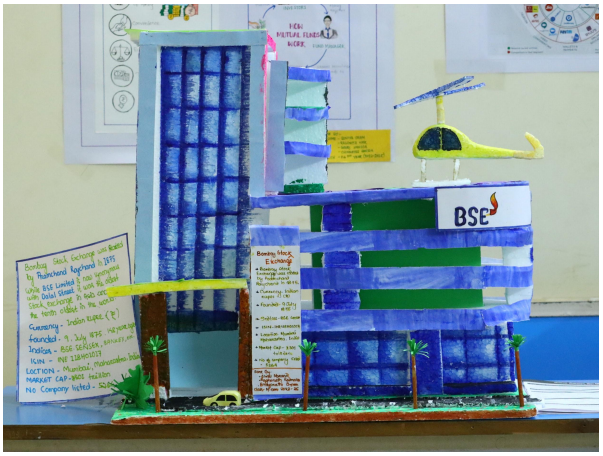
This platform has been created to aid research and teaching pedagogy inside and outside classrooms. In a rapidly changing world, the Media Lab serves as a repository for precious audio-visual materials. This innovative initiative is highly beneficial for students from indigenous communities, who have no or limited access to technologies.

 Smart Screens for Recording and Disseminating Information	 **OBS Studio: for Recording, Live Streaming, Scene Composition, Audio Mixing and Video Effects**

Link to Website - [Media Laboratory]

Business Laboratory

The Business Lab was set up for students in March 2021. The lab was established in response to the rapidly changing business landscape. It serves as a hub for individuals and organizations, where they experiment, learn and grow in a collaborative environment. Here, a diverse group of professionals, entrepreneurs, and experts explore new business opportunities and address complex challenges. It encourages innovative thinking by providing resources and support for individuals and teams to discover creative ideas and find solutions. The Lab vigorously fosters innovation and entrepreneurship. The students have used their intellect and skills to prepare model ATMs, GST implementation models and Diagrams/Models of various commerce-related concepts. Students having entrepreneurial interests are also greatly benefitted. The Lab contributes to the growth of student's creativity through hands-on training and practicals.



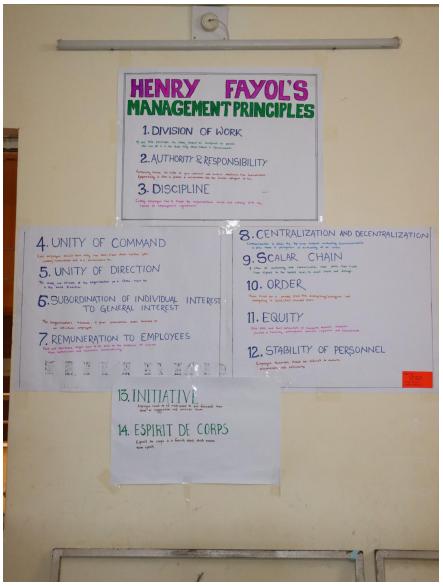
Model of Bombay Stock Exchange

Model of National Stock Exchange

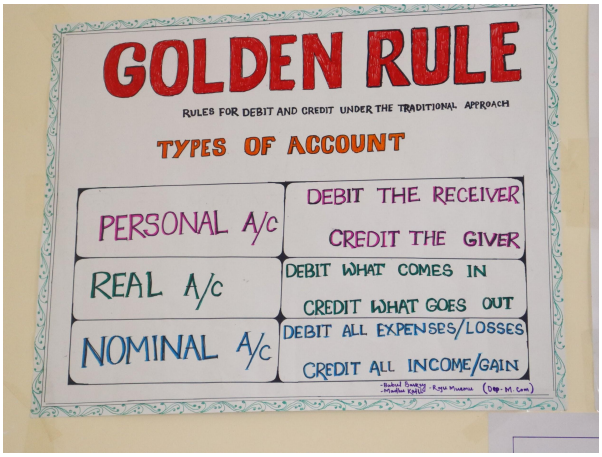
Model for GST - Teaching Aid

Model Representing Bank Functioning - Teaching Aid

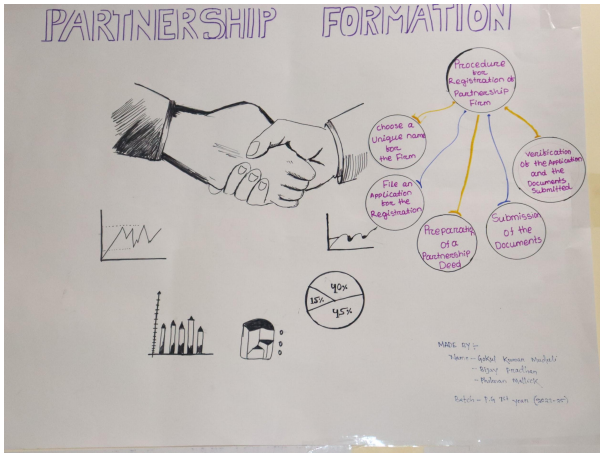
Model of ATM - Teaching Aid



Principles of Management



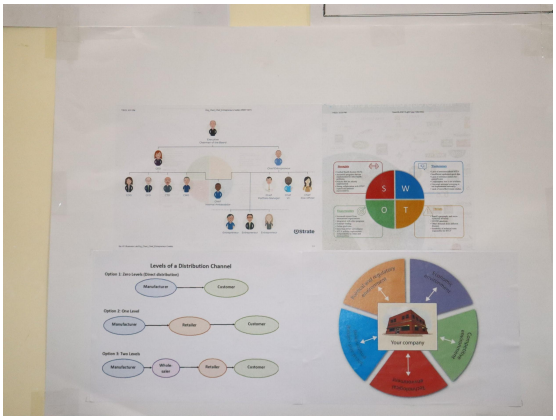
Golden Rules of Accounting



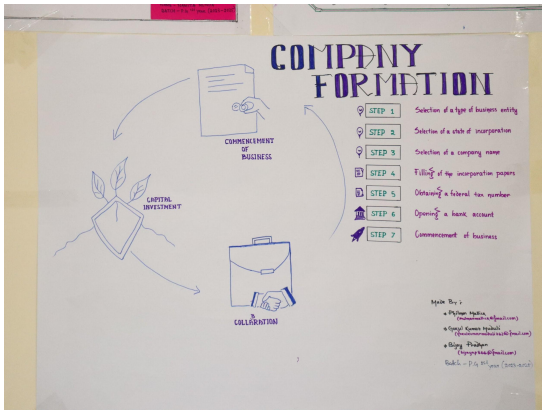
Partnership Formation

Examples of Business Process

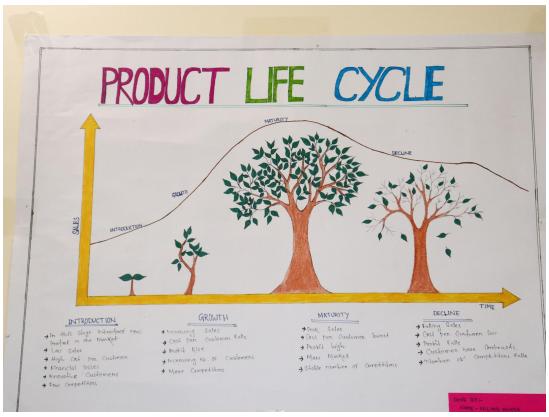
Stalwarts in the Field of Business and Management



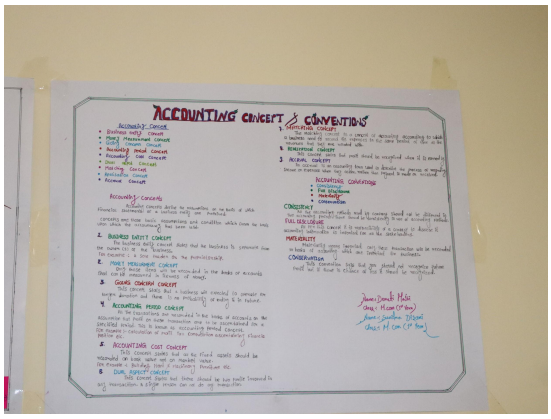
Levels of a Distribution Channel



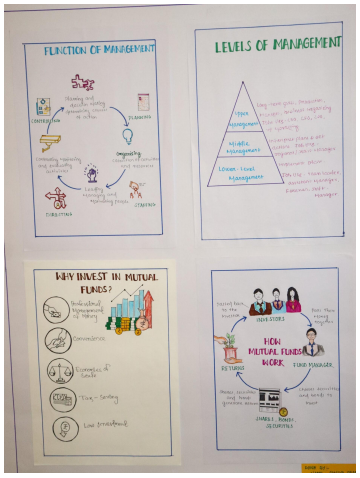
Company Formation



Product Life Cycle



Accounting Concepts & Conventions



Levels of Management and Functioning of Mutual Funds

Link to website - [Business Laboratory]

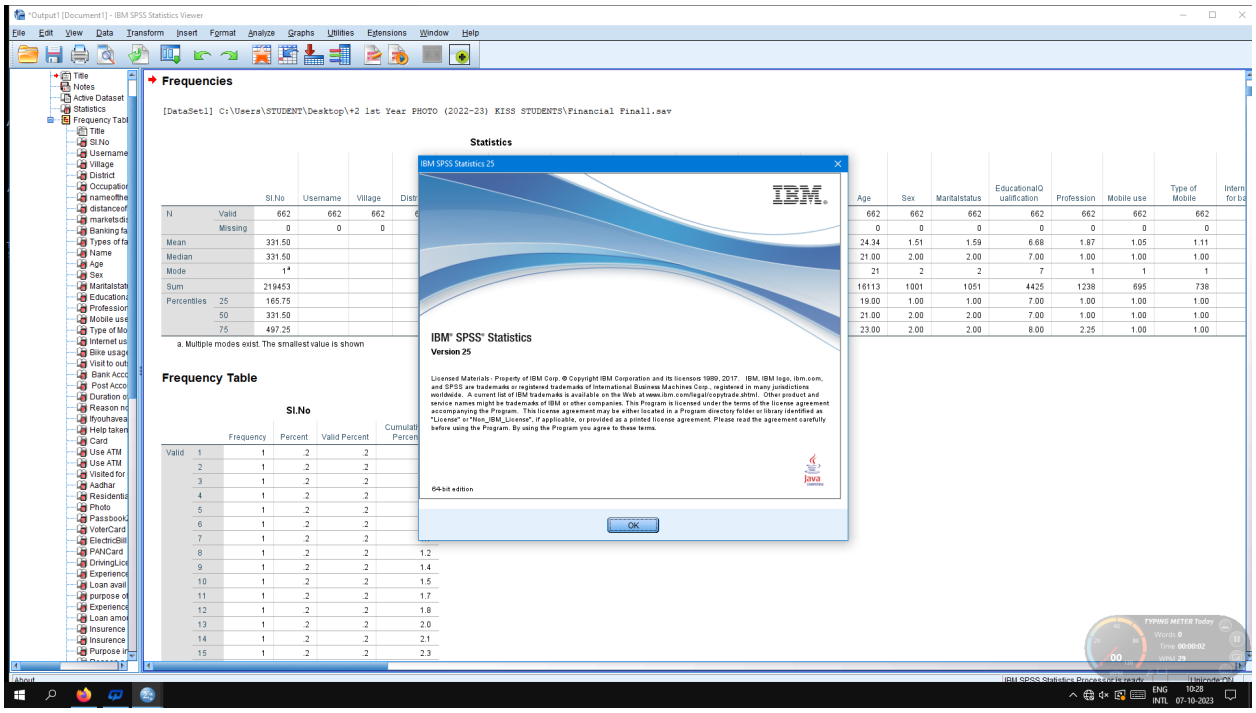
Research/Statistical Databases

The University supports research and development and has purchased related softwares, statistical tools and maintains databases in order to foster research on campus. These are used by research scholars and faculty members of KISS-DU who wish to conduct research in multidisciplinary and interdisciplinary areas.

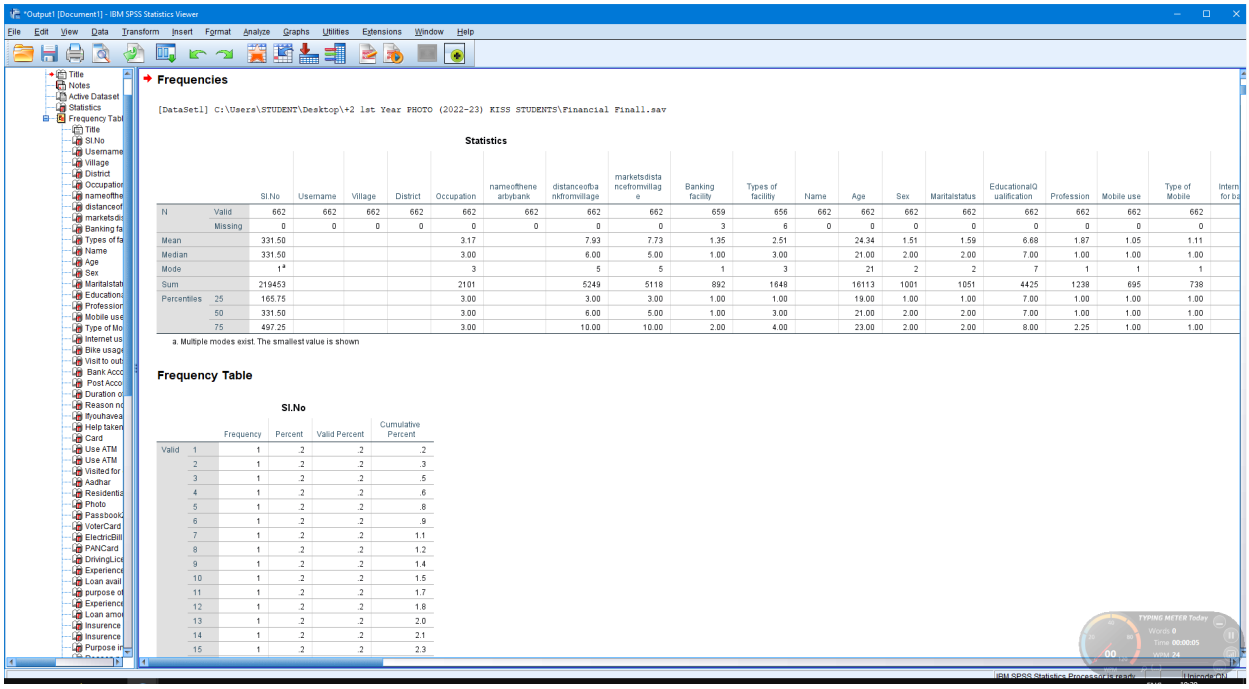
These include:

IBM SPSS

The IBM® SPSS® software platform offers advanced statistical analysis, a vast library of machine learning algorithms, text analysis, open-source extensibility, integration with big data and seamless deployment into applications.



IBM SPSS Screenshot of Version



Frequencies

[DataSet1] C:\Users\STUDENT\Desktop\+2 1st Year PHOTO (2022-23) KISS STUDENTS\Financial Finall.sav

Statistics

		Sl.No	Username	Village	District	Occupation	nameofthenearbybank	distanceofbankfromvillage	marketsdistancefromvillage	Banking facility	Types of facility	Name	Age	Sex	Maritalstatus	EducationalQualification	Profession	Mobile use	Type of Mobile
N	Valid	662	662	662	662	662	662	662	662	659	656	662	662	662	662	662	662	662	662
	Missing	0	0	0	0	0	0	0	0	3	6	0	0	0	0	0	0	0	0
Mean		331.50				3.17		7.93	7.73	1.35	2.51		24.34	1.51	1.59	6.68	1.87	1.05	1.11
Median		331.50				3.00		6.00	5.00	1.00	3.00		21.00	2.00	2.00	7.00	1.00	1.00	1.00
Mode		1[a]				3		5	5	1	3		21	2	2	7	1	1	1
Sum		219453				2101		5249	5118	892	1648		16113	1001	1051	4425	1238	695	738
Percentiles	25	165.75				3.00		3.00	3.00	1.00	1.00		19.00	1.00	1.00	7.00	1.00	1.00	1.00
	50	331.50				3.00		6.00	5.00	1.00	3.00		21.00	2.00	2.00	7.00	1.00	1.00	1.00
	75	497.25				3.00		10.00	10.00	2.00	4.00		23.00	2.00	2.00	8.00	2.25	1.00	1.00

a. Multiple modes exist. The smallest value is shown

Frequency Table

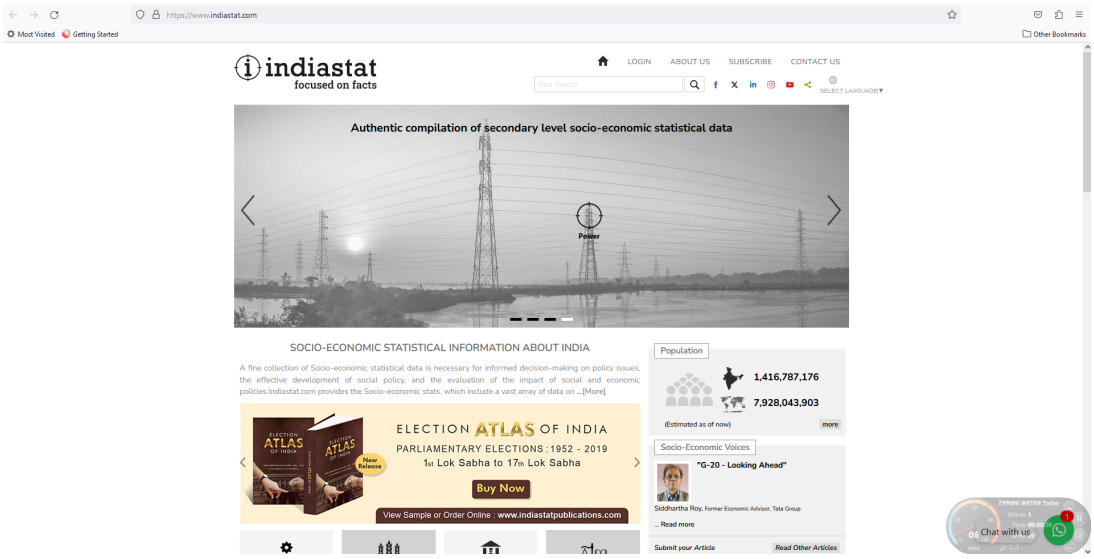
Sl.No

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.2	.2	.2
	2	1	.2	.2	.3
	3	1	.2	.2	.5
	4	1	.2	.2	.6
	5	1	.2	.2	.8
	6	1	.2	.2	.9
	7	1	.2	.2	1.1
	8	1	.2	.2	1.2
	9	1	.2	.2	1.4
	10	1	.2	.2	1.5
	11	1	.2	.2	1.7
	12	1	.2	.2	1.8
	13	1	.2	.2	2.0
	14	1	.2	.2	2.1
	15	1	.2	.2	2.3

IBM SPSS Screenshot of Analysis

Indiastat Database

Indiastat (subscribed in February 2022) provides authentic and perhaps the most comprehensive compilation of secondary-level socio-economic statistical information about India and its states on various socio-economic parameters. These parameters are General Info, Demographics, Economy, Agriculture, Civil Supplies and Consumer Affairs, Environment and Forest, Industries, Infrastructure, companies, Education, Health, Housing, Labour & Workforce, Polity, Media, Insurance, Tourism, Crime & Law, Social Welfare & Developmental Schemes, etc.



Indiastat Database for Research

Link on website - [Indiastat]

Amphitheatre

Kalinga Institute of Social Sciences (KISS) Deemed to be University has an Amphitheatre. It is a multipurpose platform created for the students with an objective to build a research ethos, promote art and culture, hold academic discussions, exchange of ideas and information among students, and events organized by the Alumni Association. The Amphitheatre is equipped with audio-visual aids which enhance its effectiveness. It is an integral part of our University's academic eco-system and performs the following functions:

- Professors of Practice teach, disseminate here indigenous knowledge, observations, experiences and impart practical training to students of KISS-DU. They conduct special classes and sessions for students outside the classroom close to nature in the Amphitheatre.
- Amphitheater is used as a platform for curricular and extracurricular activities like debates, awareness/sensitization programmes, events organized by the Alumni Association, painting competitions, cultural performances. It is also used for academic lectures, seminars, workshops, observance of commemorative days and various presentations.

Capacity and Facilities

- The Amphitheatre has a seating capacity of 150.
- Its length is 11 ft., and its width is 32 ft.
- It has audio-visual facilities to support presentations and performances, including microphones, projectors, and screens.
- Excellent seating arrangements and the green surroundings contribute to building an ideal environment at the Amphitheatre.

Accessibility

Centrally located, the Amphitheatre is accessible to all members of the university community, including persons with disabilities. The infrastructural set-up adheres to the stipulated regulations framed for the latter.

Maintenance and Safety

- Regular maintenance and safety checks are conducted to ensure that Amphitheatre is safe and operational.
- Fire safety measures and emergency exits are in place.

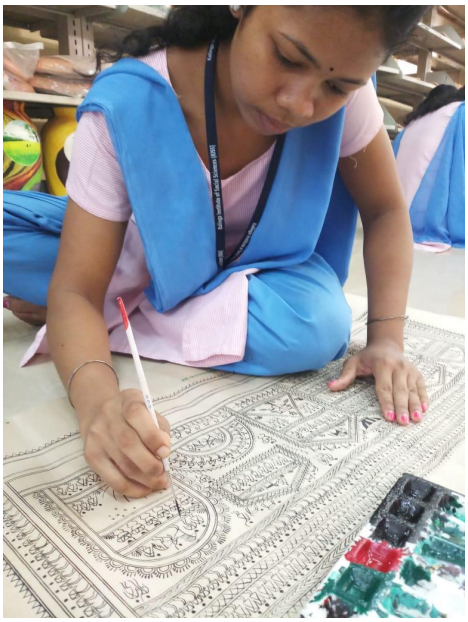
Link to Website - [Amphitheatre]

Art Gallery

The Art Gallery at KISS-DU has been established to impart vocational training to students. It aims to protect, promote and preserve indigenous art forms. The 500sq.ft art gallery not only enhances the aesthetic sensibility of students, it also helps build their self reliance. It integrates art into the curricula and hones the skills of the students.

FOR
SALE

25 Silver Jubilee
SOIL TO SILVER



Link to the Website - [Art Gallery]

Peer Team Visit to Art Gallery Photographs

Any other facilities to support research

Language Laboratory

Kalinga Institute of Social Sciences Deemed to be University (KISS-DU) has taken significant steps through its pioneering Mother Tongue-Based Multilingual Education (MTBMLE) approach. This initiative started as a response to the academic challenges posed by students' limited familiarity with the language of instruction resulting in learning gaps.

To enhance the effectiveness of MTBMLE, KISS-DU established a Language Lab in September 2018. This Lab is the first in India designed specifically for tribal languages. It facilitates the teaching of languages in a seamless and highly effective manner. Importantly, it has created a well-structured constructive collaboration between the University and KISS School.

The unique strength of the MTBMLE project lies in its collaborative approach. KISS-DU collaborates with subject experts, researchers, and civil society members to initiate, shape, and propel the project. This effort includes brainstorming sessions and seminars to foster innovative ideas and strategies. While the University focuses on research, innovation, conceptualization, and theorization, the School concentrates on experimentation and implementation.

At the university level, KISS-DU has introduced an innovative postgraduate course titled "Multilingual Education in India for Tribal." This equips students pursuing PG in Comparative Tribal Languages & Literatures with skills required for MTBMLE teaching. The initiative enhances knowledge and fulfills the demand for qualified MTBMLE teachers at School level.

KISS-DU's Language Lab highlights the institution's unwavering commitment to inclusive and effective education. By addressing language barriers and fostering collaboration between the University and the School, KISS-DU is taking significant measures to empower tribal communities through culturally relevant education.

Ph.D. scholars and PG Students crafting MTBMLE primers for school-level implementation

Postgraduate students passionately teaching school students through their mother tongue

Link to Website - [Language Lab]

Nano Innovation Laboratory

Nano Innovation Laboratory was established in 2020 to conduct scientific research in the emerging Nano Science and Technology field. Currently, research is going on the synthesis and characterization of semiconducting and Nanomaterials synthesis and different electronic applications, Photocatalytic applications, and Device fabrication like a thermistor, varistors, etc. Research is also being carried out in wide-band-gap semiconductor nano-materials for environmental cleaning, optoelectronic devices and nano-ferrites. The Centre has facilities to synthesize pure and doped semiconductor wide-band-gap nano-materials. ZnO, CdS, TiO_2 and metallic nano-particles, using high energy ball milling, chemical co-precipitation technique, auto combustion and sol-gel

method. The synthesized nanomaterials are characterized by their photocatalytic activities and their antibacterial activities.

Nano Innovation Laboratory at the School of Indigenous Knowledge Science and Technology (IKST) is a Resource Centre, which addresses scientific problems related to nanotechnology. The objectives of the laboratory include the synthesis and production of nanoparticles, investigation of electrical properties, optical, antibacterial, and photocatalytic properties and enhancement of these properties. The Centre focuses on various other areas of nanotechnology.

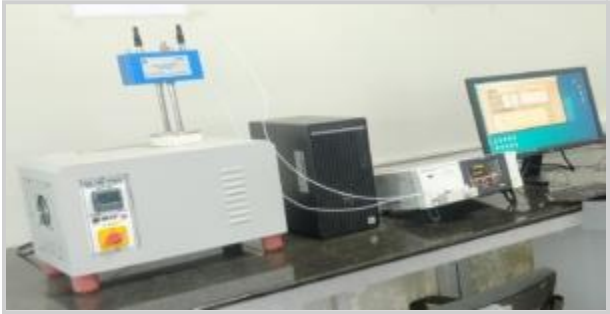
The Nanotechnology Research Laboratory aims to initiate and pursue research activities related to nanotechnology and nanoscale phenomena through funded research projects, doctoral and masters level projects, bachelor degree projects, short-term programs and collaborative research with other universities, institutes and industries. The laboratory is funded mainly by the Department of Science and Technology, Science and Engineering Research Board (SERB) of the Government of India. Apart from the experimental and computational facilities in the laboratory, assistance from centralized facilities and other laboratories is also utilized in synthesis, characterization and analysis.

The major facilities available in the laboratory include standard equipment as well as experimental systems developed as part of ongoing research projects.

Hot Air Oven Make- ANTS LAB EQUIPMENTS Temperature range: RT to 300°C	**Analytical Balance with Density Kit Make-Wenser (MAB220T) Capacity-220g**

Make- ANTS LAB EQUIPMENTS Maximum Temperature-1400ºC Heating rate- up to 15ºC/Min

Hydraulic Press-Manual (20Ton) Make- ANTS LAB EQUIPMENTS



LCR Meter Model-IM3536 (Frequency range 4 Hz to 8 MHz) Make-Hioki

Link to Website - Nano Innovation Laboratory

Link to Peer Team Visit to Nano Innovation Laboratory Video

Peer Team Visit to Nano Innovation Laboratory Photographs

Research and Ethno-medicine Laboratory

- This laboratory generates first-hand field information on ethnomedicinal practices for their scientific validation as studies on ethnomedicines are pioneering attempts to combat human afflictions.
- This laboratory is engaged in documenting traditional practices, collecting and identifying medicinal plants, and developing pharmacognostic and quality profiles of medicinal plants and plant products used by indigenous communities.
- The laboratory is also involved in developing crude drug discovery and herbaria.
- This laboratory focuses on the therapeutic aspects of medicinal plants and the safety assessment of t medicinal plants/plant products used by tribal communities.
- Safety assessment is carried out through different toxicity studies, such as dermato-toxicity, embryotoxicity, neurotoxicity in the zebrafish model.
- Medicinal plants collected from different tribal populated areas of Odisha are screened at the laboratory to study their antiviral activities.
- The laboratory also screens different medicinal plants/lichens to study their anticancer activities.

Seeds Collected for Experiment and Kept in Laboratory

Plant extract Preparation

Herbaria

Fish Care and Egg Collection

Fish Care and Egg Collection

Link to Website - [Ethnomedicine Laboratory]

Link to [Peer Team Visit to Research and Ethnomedicine Laboratory Video]

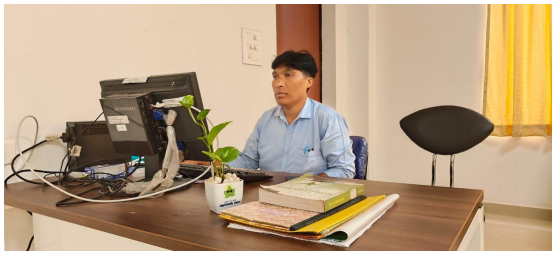
Peer Team Visit to Research and Ethnomedicine Laboratory Photographs

Incubation Centre

KISS Indigenous Incubator at the Kalinga Institute of Social Sciences Deemed to be University, Bhubaneswar (Odisha), aims to strengthen infrastructure, provide facilities for capacity building, and empower tribal students and communities through entrepreneurship and agribusiness. Its ultimate goal is to promote economic self-reliance, cultural preservation, and sustainability in agriculture and allied activities. KISS Incubation Center has been supporting the KISS Science and Technology Innovation Hub for Tribal, a DST seed grant-funded project.

The Centre aims to

- Encourage innovation in agriculture and allied activities by supporting the development of new technologies, products, and services.
- Empower tribal students and communities with the knowledge, skills, and resources to engage in successful entrepreneurship and agribusiness endeavors.
- Build economic self-reliance by promoting entrepreneurship for tribal individuals and communities to improve their livelihoods.
- Promote sustainable agricultural practices within tribal communities to ensure long-term food security and environmental stewardship.
- Recognize and preserve the cultural heritage and traditional knowledge of tribal communities while integrating modern agribusiness practices.

 KISS Science and Technology Innovation Hub for Tribals	 **Faculty Engaged in Innovation Work**
 Students Engagement Team - Jack Fruits Chips	 **Student Engagement Team - Tribonext (Tribal Cloth Design and Terracotta)**

Student Engagement Team - Value Added Millet Products

Student Engagement Team - Tribal Social Welfare Association (Social Media Awareness)

Innovation Management Team

Link to Website - [Incubation Centre]

Link to [Peer Team Visit to Incubation Centre Video]

Peer Team Visit to Incubation Centre Photograph

Dark Room

A dark room in a Physics Laboratory is a testament to human curiosity and ingenuity. It is a space where the mysteries of the universe are unravelled with precision, where the secrets of light and matter are exposed.

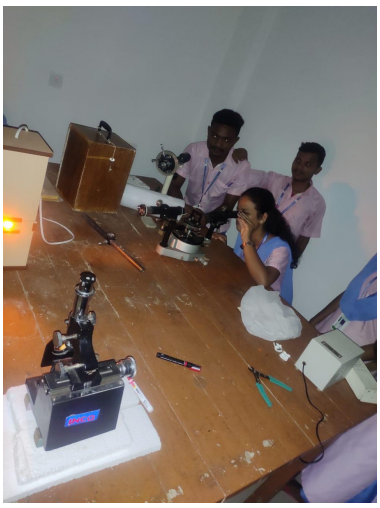
KISS DU has a “Dark Room” related to its Physics Programme. It is a 10 X 10 ft. room. It is well-equipped and suitable for PG students for conducting optical experiments. The room has dark-coloured cloth covering systems for carrying out light experiments.

Experiments in the Dark Room

1. Newton’s Ring Experiment
2. Diffraction Grating Experiment
3. Prism Experiment
4. Polarimeter Experiment

KISS Students Getting Demonstration on 'Sodium Light' Experiment

Students Doing 'Diffraction Grating' Experiment



Students are Doing 'Sodium Light' Experiment in the Dark Room

Link to Website - [Dark Room]

Link to [Peer Team Visit to Dark Room Video]

Peer Team Visit to Dark Room Photographs

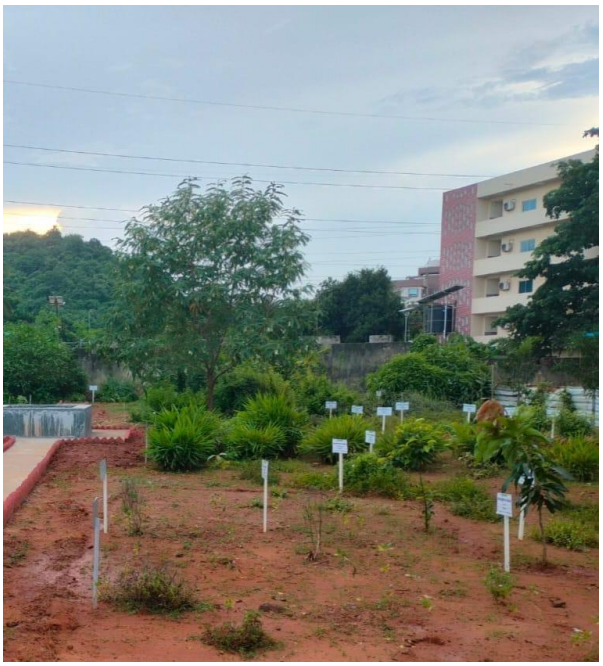
Medicinal Plant Garden

Medicinal plants have played an important role in human healthcare as essential ingredients of traditional medicines for thousands of years. Traditional systems of medicine continue to be widely practiced. Population rise, inadequate supply of drugs, prohibitive cost of treatments, side effects of several synthetic drugs and development of resistance to currently used drugs for infectious diseases have led to increased emphasis on the use of plant materials as a source of medicines for a wide variety of human ailments. Our medicinal plant garden focuses on the conservation, cultivation, research and educational activities related to plant species having medicinal properties.

The objective of our medicinal garden, which was created in 2017-18 and is spread over half-an-acre of land, is to raise awareness of conservation and traditional uses of herbs and medicinal plants as well as to identify and conserve these important plants. Our garden is actively involved in organizing educational programs/events for the benefit of students and the general public.

Professors of Practice of KISS-DU participate in various workshops related to medicinal plants. Presently, the garden has seventy varieties of medicinal plants such as trees, shrubs and herbs.

KISS-DU has a plan to cultivate as many medicinal plants as possible. The institution has a plan to grow some of the important medicinal plants on a large scale and to conserve endangered species.



Medicinal Plant
Psidium guava
(Pijuli)
Benefits
Hypoglycemic, Lipid lowering,
Antibacterial, Antioxidant

Medicinal Plant
Ocimum gratissimum
(Rama Tulasi)
Benefits
Inflammation, Diarrhoea

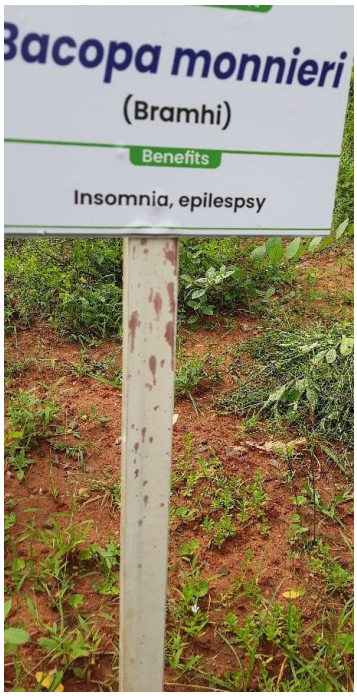
Medicinal Plant
Ocimum gratissimum
(Rama Tulasi)
Benefits
Inflammation, Diarrhoea

Persicaria chinesis
(Gobinda Goruda)
Benefits
Eczema, Stomach ache

Medicinal Plant
Ocimum kilimandscharicum Guerke
(Karpura Tulasi)
Benefits
Colds, Cough, Abdominalpains, Diarrhoea

Medicinal Plant
Mentha arvensis
(Paper mint)
Benefits
Hyper tension, Heart disease

Medicinal Plant
Mentha arvensis
(Paper mint)
Benefits
Hyper tension, Heart disease


Bacopa monnieri
(Bramhi)
Benefits
Insomnia, epilespsy

Medicinal Plant
Wedelia chinensis
(Bhrungaraja)
Benefits
Fever, Child birth

Medicinal Plant
Aloevera
(Gheekuanri)
Benefits
Eczema, Digestive problems

Curcuma Montana
(Kala Haladi)
Benefits
Cough, Hepatic Disorder
Biliary disorder

Medicinal Plant
Abrus precatorius
(Kaincha)
Benefits
Eczema, Stomatitis

Medicinal Plant
Alpinia galangal
(Ghoda Bacha)
Benefits
Fever, muscle spasms,
intestinal gas, swelling

Medicinal Plant
Wedelia chinensis
(Bhrungaraja)
Benefits
Fever, Child birth

Kalanchoe lanceolata
(Hema Sagara)
Benefits
head ache

Medicinal Plant
Desmodium gangeticum
(Sala Parna)
Benefits
Cough, Asthma

Link to Website - [Medicinal Plant Garden]

Peer Team Visit to Medicinal Garden Photographs