



**K.R. MANGALAM UNIVERSITY**  
THE COMPLETE WORLD OF EDUCATION

# School of Basic and Applied Sciences (SBAS)

**ESTABLISHED  
2013**

*Welcomes*



**NAAC Peer Review**

**Team**

**June 16-18, 2025**



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## VISION



❑ **Collaborations** with national, international academic & research organizations and industries for knowledge creation, advancement and application of innovative practices in sciences.

❑ **Create** conducive environment for lifelong learning.

❑ **Empower** students to be socially responsible and ethically strong individuals through value-based science

## MISSION



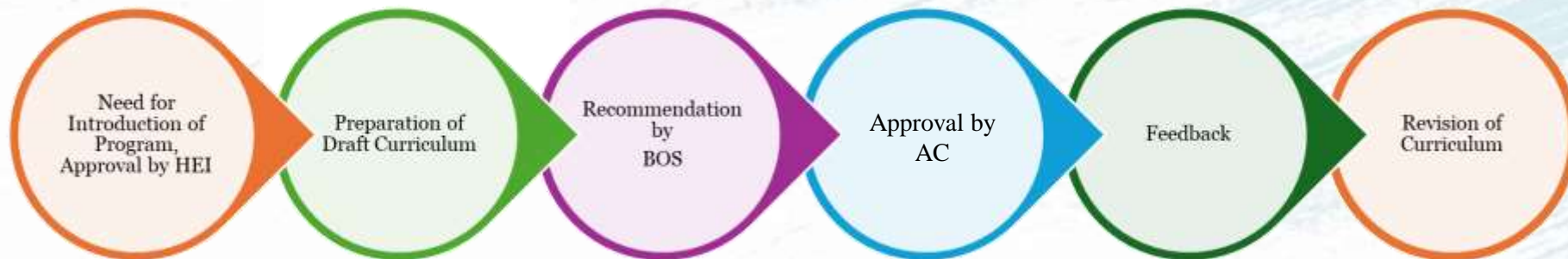
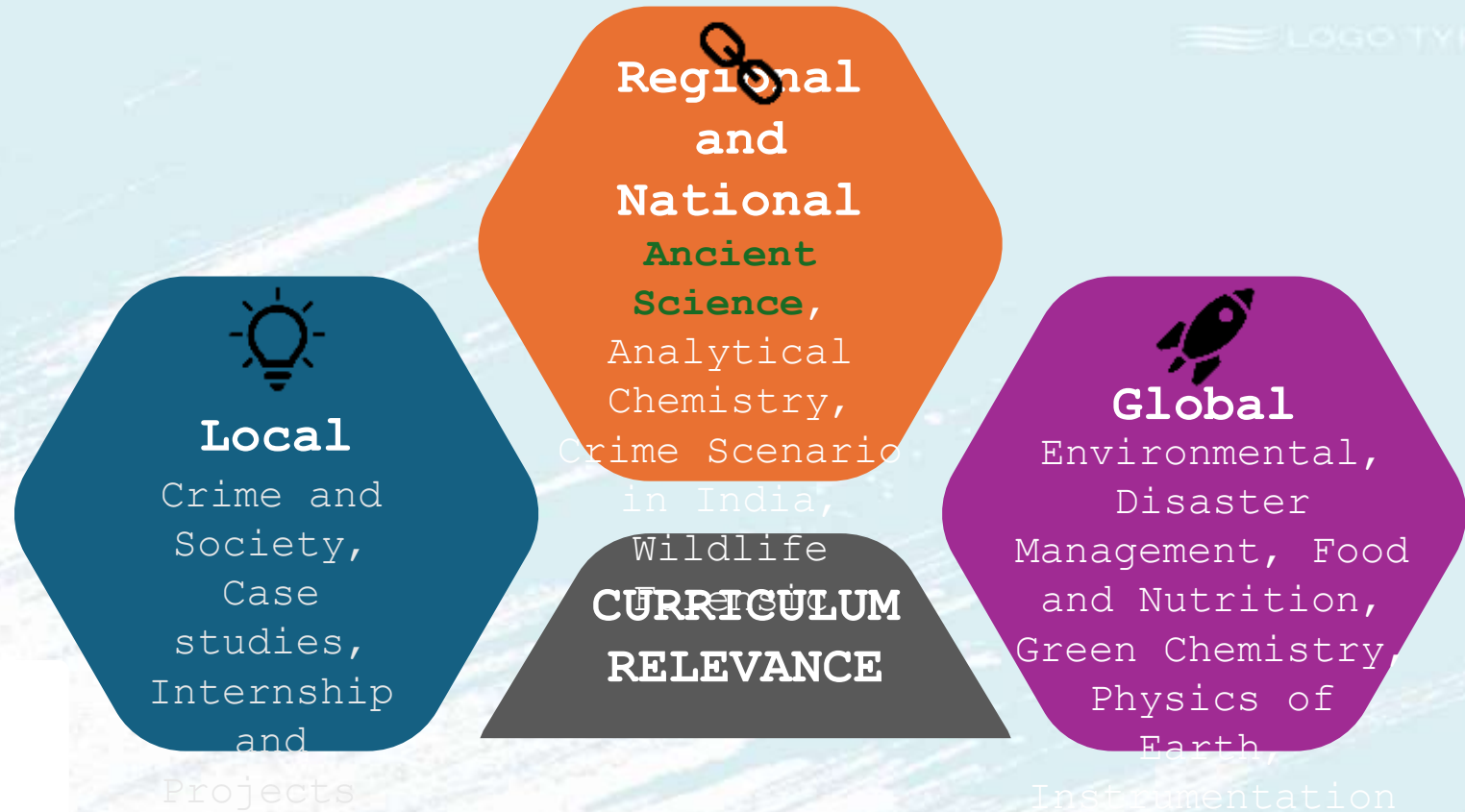
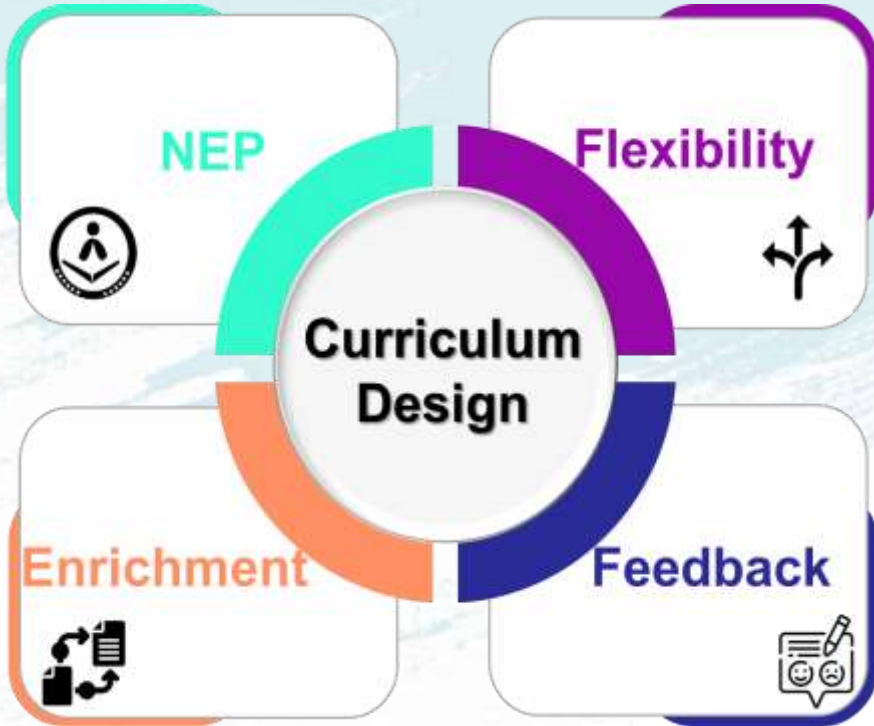


# SBAS as on Date



# CURRICULAR ASPECTS

## Curriculum Design & Development



## Focus on Employability/ Entrepreneurship/ Skill Development

### Employability



Medicinal Chemistry (BSCH305A), Applied Optics (BSPH306A), Basics of Digital Forensics (BSFS112A), Cyber forensic I (BSFS111A), Forensic Biology and Serology (BSFS203A)

### Entrepreneurship



Intellectual Property Right (IPR) and Business Skills for Chemists (BSCH110A), Herbal Technology (BSCH109A), Artificial Intelligence Lab (BSCS 451A), Basic Instrumentation skills (BSPH305A), Forensic Dermatoglyphics (BSFS102A), Questioned Document (BSFS104A), Forensic Physics and

### Skill Development



Data Analysis and Visualization (ETCS109A), Analytical Techniques of Chemistry (BSCH205A), C++ Programming for Mathematics (BSCS113A), Introduction to Computer Science and Programming In Python (ETCS104A), Crime Scenario in India (BSFS215A), Criminology and Penology (BSFS302A)

## Curricular Enrichment

### Professional Ethics



Quality Management and Ethics (BSFS313A)

### Environment & Sustainability



Environmental Studies (UCES125A), Disaster Management (UCDM301A), Green processes of Chemistry (BSCH310A)

### SDG

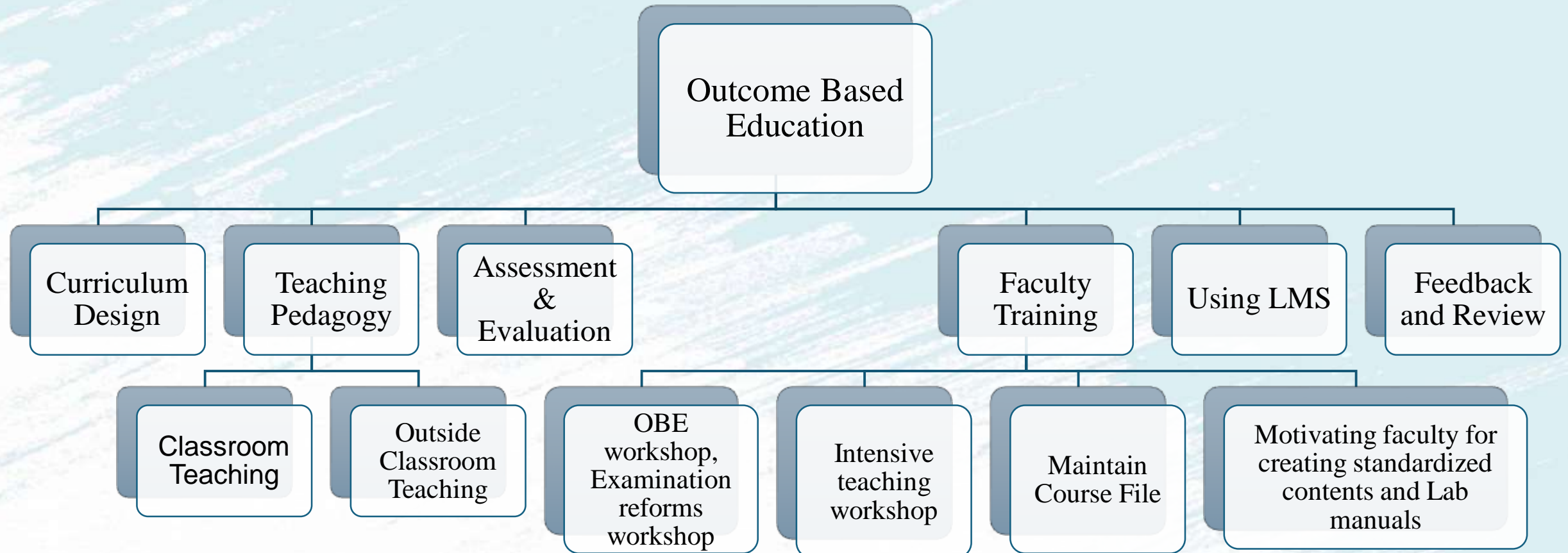


Through experiential calendar and research projects

### NEP



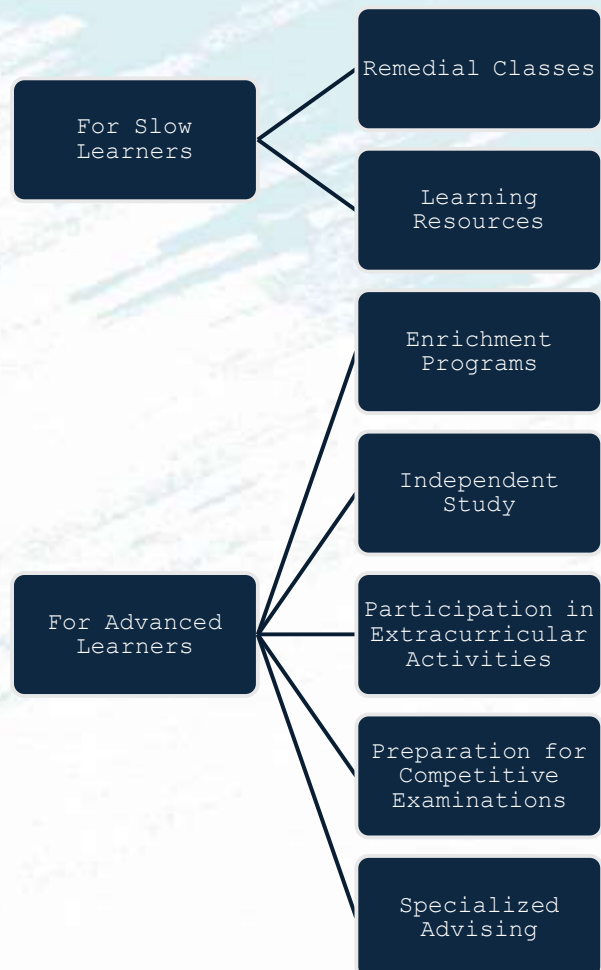
Major Course, Minor Courses, Ability Enhancement Courses, MOOC, Skill Enhancement Courses, Value Added Courses, Internships and Projects





# CATERING TO DIFFERENTIAL LEARNERS

Year	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
#Students admitted	33	27	9	14	50	104
#Faculty	22	18	17	17	22	26



## Impact of Differential Learning

- ☐ Improved Student Achievement
- ☐ Increased Student Engagement
- ☐ Enhanced Self-Efficacy
- ☐ Positive Learning Environment



**Career Counselling:** Aditya Narayanan visited NPL before choosing career in physics



Participants in declamation on energy saving ideas



Remedial Classes



# CASE STUDY: Slow and Advanced Learners



Mr. Deepak Ahuja (B.Sc. (Hons.) Physics, 2022-2025)

Position: Junior Data Analyst (Part-time)  
Company: Max Healthcare Institute Limited



Max Healthcare Institute Limited  
hr.dwarka@maxhealthcare.com  
401, 4th Floor, Mani Excellenza, S. V. Road, Vile Parle (West),  
Mumbai - 400 056, Maharashtra, India.

### Offer Letter

Date: 07/06/2025

Dear Deepak Ahuja,

We are pleased to extend an offer of employment to you for the position of **Junior Data Analyst** at **Max Healthcare Institute Limited**. We believe that your skills and experience will be a valuable addition to our team. Please read through this letter and indicate your acceptance by signing this offer letter.

#### Position Details

- Job Title: Junior Data Analyst
- Reporting to: Mr. Deen Dayal
- Start Date: 08/06/2025
- Employment Type: Part-time
- Work Schedule: 9:00 AM to 4:30 PM
- Job Location: In-Office


#### Compensation and Benefits

- Annual Salary Package: ₹3,50,000.00
- The above-mentioned salary is the total cost to the company and includes all payments made and benefits provided by the company directly or indirectly to or on your behalf, whether as salary or otherwise.



Mr. Amrit Ananad (B.Sc. (Hons.) Physics, 2022-2025)

Selected as Lieutenant through CDS Examination



**K.R. MANGALAM UNIVERSITY**  
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Slow and Advanced Learners

Name of the School: School of Basic and Applied Sciences

Name of the Program: B.Sc.(H) Physics

Course Name: Physics of Earth

Semester:VI

Academic Year: 2024 - 25 (Even)

Name of the Faculty:Dr. Ruby Jindal

Course Code:BSPH308A

Section: All

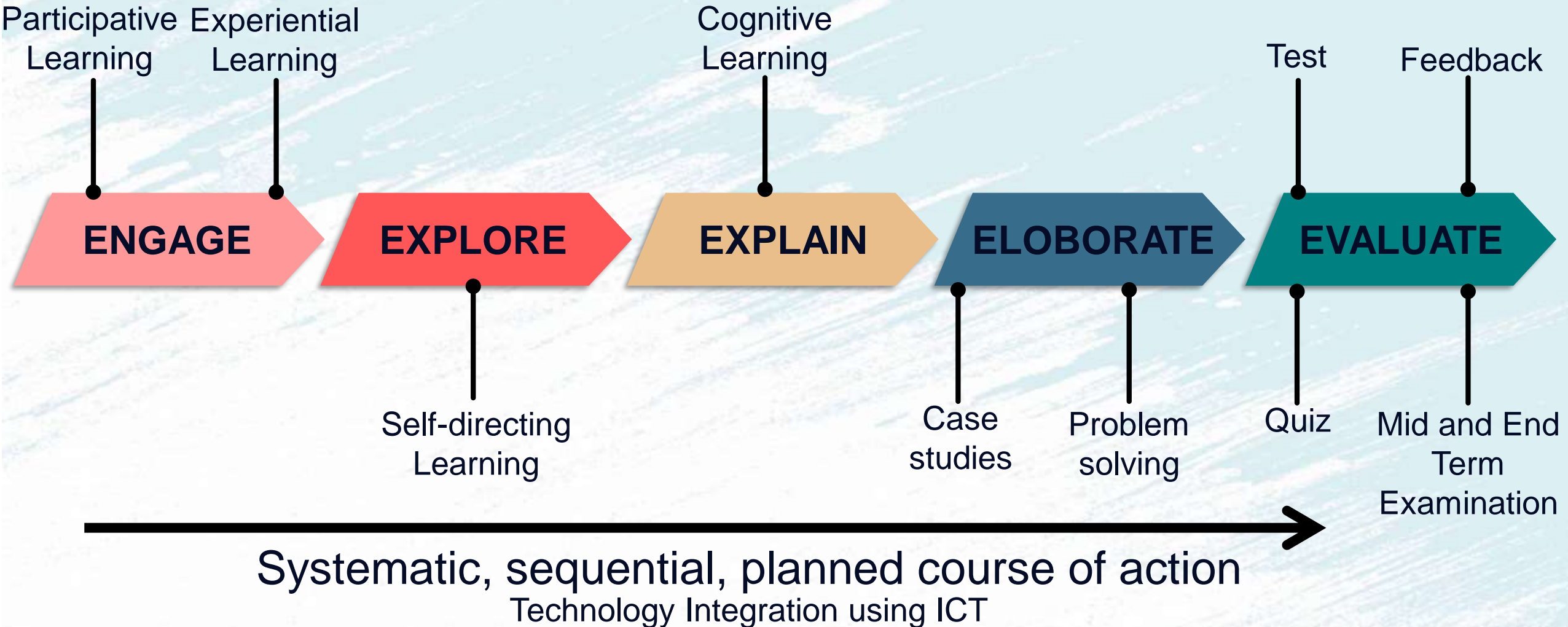
Table 02: Change of Learning Level

S. No.	Student Roll No.	Name of the Student	Learning Level of the student in Mid Term	Learning Level of the student in End Term	Change of Learning Level
1	2203090002	ARYAN BAJAJ	Advance Learner	Advance Learner	No
2	2203090003	SUMIT YADAV	Average Learner	Average Learner	No
3	2203090004	SANNAH RAINER SHARMA	Advance Learner	Advance Learner	No
4	2203090005	DEEPAK AHUJA	Average Learner	Advance Learner	Yes
5	2203090006	AMRIT ANAND	Advance Learner	Advance Learner	No
6	2203090007	KASHISH	Advance Learner	Advance Learner	No
7	2203090008	GAURAV	Slow Learner	Average Learner	Yes
8	2203090009	SHREYA GUPTA	Advance Learner	Advance Learner	No
9	2203090010	DISHA TYAGI	Slow Learner	Advance Learner	Yes

# TEACHING-LEARNING PROCESS

LOGO TYPE

Outcome Based Education, Student centric process for holistic development of students





# EXPERIENTIAL LEARNING

Workshop

Internships

Hands-on  
learning in labs

Visits

Extension



Guest Lecture by Prof. Ajoy Ghatak  
on November 14, 2018



Wacky Science Activities Dec 7,  
2022



Workshop on Robotics on Sept 26,  
2019



Visit to Science Centre  
on April 13, 2022



Chem-Soft workshop on Feb 28,  
2022



Enhanced learning with PBL. June  
30, 2021



Internships

Hands on  
Learning

Competition

Case Studies

Debates

Projects



Decor Competition on Feb  
22, 2022



Workshop on Food  
Adulteration Jan 23, 2020



Workshop on Introduction to  
the World of Microcontrollers  
and Robotics, on 26<sup>th</sup>  
September 2019



Debate Competition



Industrial Visit to Zero  
Waste Chemicals IMT  
Manesar Sept 30, 2022



Session on  
Communication skills on  
April 20, 2023



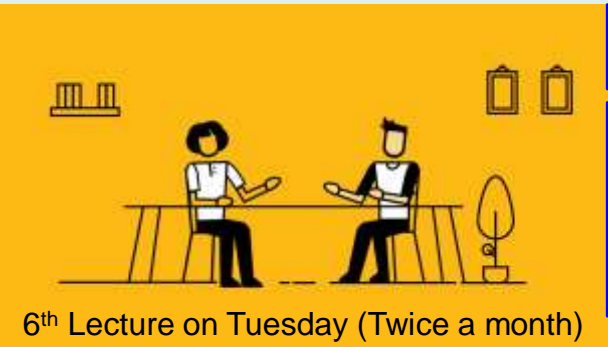
Innovative Ideas for Sustainable Solutions Nov 25,  
2022



# MENTOR-MENTEE SCHEME

- Discuss the Mentor-Mentee Session Concept
- Continuous Guidance and Monitoring
- Academic and Emotional Support
- Advising on Course Selection

- Development of Knowledge and Skills
- Career Exploration and Development



- Academic Success
- Personal Development and Support

- Career Development Guidance
- Progress Tracking
- Conducting Parent-Teacher Meetings (PTMs)
- Encouragement for Extracurricular Activities



Students asking doubts about assignment submission on LMS Moodle



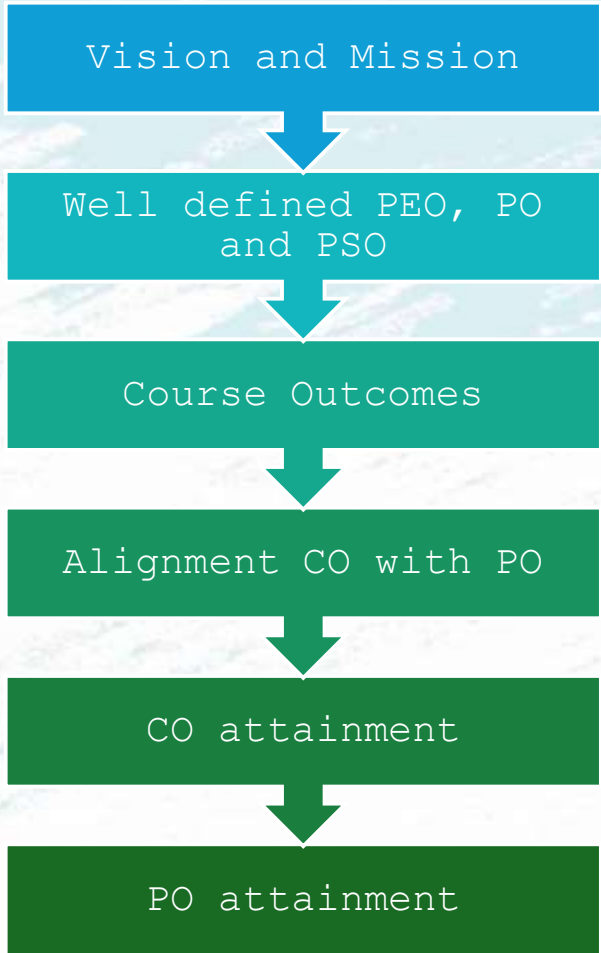
A motivational talk for various career opportunities




Got admission offer at University of Surrey, UK



# STUDENT PERFORMANCE AND LEARNING OUTCOMES



Roll no. ....

  
SCCH102

School of Basic and Applied Sciences  
B.Sc. in Chemistry (H) Research  
End-Term Examination  
June, 2024  
SCCH102- Physical Chemistry-I

Time: 3 Hours Maximum Marks: 50

Instructions:

- 1) Question No. 1 under Section-A is compulsory.
- 2) Attempt any four from Q. No. 2 to Q. No. 6 under Section-B
- 3) Attempt any two from Q. No. 7 to Q. No.9 under Section-C

Section-A(Compulsory)

1. (a) Fill in the blanks with appropriate words: 3  
[CO-1] [L-2]  
(i) Dissociation constants can be used to predict the behavior of-----.  
(ii) For a monoatomic ideal gas molecule, the number of degrees of freedom is-----.  
(iii) The ordered arrangement of atoms, ions, or molecules in a solid is known as the \_\_\_\_\_ nature of the solid state.
1. (b) Give the term used for the following: 2  
[CO-1] [L-1,2]  
(i) The equation which relates the pH of a buffer to the  $pK_a$  of its weak acid component and the ratio of acid to conjugate base concentrations.  
(ii) The temperature above which real gases behave like ideal gases at low pressures.
1. (c) State one function of each of the following: 2  
[CO-1] [L-2]  
(i) Common ion effect  
(ii) Collision diameter
1. (d) Match the items given in Column-A with those in Column-B: 3  
[CO-1] [L-3]

Column-A	Column-B
Dissociation constant ( $K_a$ )	It describes the arrangement of atoms in a crystal
Crystalline	It states that each degree of freedom of a molecule possesses an average kinetic energy of $(1/2)kT$
law of equipartition of energy	Weak acid

## CO Attainment Calculation

COs Attainment Level								
Event		Mid-Term Exam (MM 20)		End-Term Exam (MM 50)		Average CO Attainment (% Calculation)		
Course Code	Course Outcome	CO Percentage (%)	CO Attainment Level	CO Percentage (%)	CO Attainment Level	CO Attainment %	Overall CO Attainment	Final Average Co (Average Co Attainment per Course)
SCCH 102	CO1	100.0	3	93.3	3	95.24	3	72.62
	CO2	86.7	3	80.0	3	81.90	3	
	CO3			40.0	2	40.00	2	
	CO4			73.3	2	73.33	2	

Course Title: PHYSICAL CHEMISTRY-I  
Course code : SCCH102

Handbooks, Course File and Website



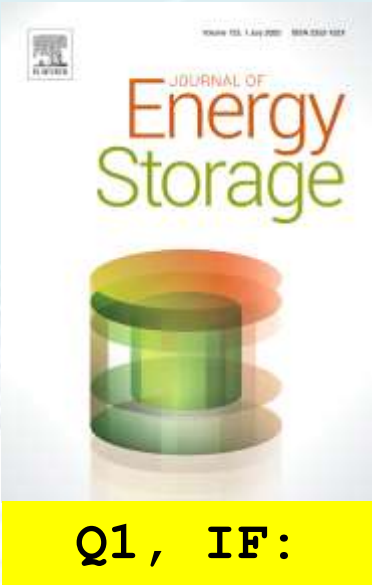
## Research Publications (2018 – Till date)

Patents Published= **18**  
Patents Granted=**19**  
Total Book/Book Chapters=**682**  
Conference Proceedings= **65**  
Journal Publications = **210 (54 SCI)**  
PhD Awarded= **19**

## Highly Cited Publications

Faculty Name	Title	Journal	Year	Citations
Dilraj Preet Kaur and Seema Raj	Recycling/reuse of plastic waste as construction material for sustainable development: a review	Environmental Science and Pollution Research	2022	153
Romila Manchanda	PGMD/curcumin nanoparticles for the treatment of breast cancer	Scientific Reports	2021	91
Diwakar Padalia	Design modifications in micro pin fin configuration of microchannel heat sink for single phase liquid flow: A review	Journal of Energy Storage	2023	79

## Top IF Journals



1250  
Total Citations

18  
h-index

2014  
onwards

Details

8 Faculty

22.2  
1

2023 -  
145.3  
9

2020-23  
5  
Projects

8  
Faculty

16  
Journal Articles

Seed Grants

Research, Innovation and  
Extension



### Value Chain- Handicraft: At Garhi Bazidpur village in SC community

**School of Basic & Applied Sciences**



# CONFERENCES ORGANIZED (4)

## AMGSE-2025 March 20-21, 2025



**180** Registrations  
**70** Poster Presentations  
**75** Oral Presentations

## AMGSE-2024 February 15-16, 2024



**120** Registrations  
**45** Poster Presentations  
**60** Oral Presentations  
**50** Online Participant  
**20** Research Article Published

## IFPAM-2023 March 23-24, 2023



**Keynote Speakers:**

- Prof. Oscar Raymond Herrera
- Prof. J.L. Sanchez
- Prof. R.K. Dwivedi
- Dr. Jitendra Pal Singh
- Dr. Subhash Chandra
- Dr. Mukesh Kumar Thakur

**79** papers presented

## AASET-2021 May 19-20, 2021



**Keynote Speakers:**

- Dr. Teerawat Issariyaku, NTPCL, Thailand
- Dr. Romila Manchanda, University of Michigan, USA
- Dr. K Srinavas, Senior Principal Scientist, CSIRIICT, Hyderabad

**15** papers presented



# EXTENSION ACTIVITIES & CASE STUDIES

## MOU Signed with DC Office, Gurugram

Adoption of five villages: Ghamroj, Berka, Garhi Wazidpur, Kharoda, Lakuwas

- Nukkad Natak on Beti Bachao Beti Padhao
- Diagnosis of health Problems in Women and their Cure
- Paryavaran Mitra: Plantation Drive
- Nukkad Natak on Female Foeticide
- Play on cultural diversity of India
- Importance of Oxygen in Living Body: Air and Atmosphere
- Wellness Workshop: Food Adulteration
- Street Play to create Awareness on Cyber and Mobile Phone Frauds In Collaboration with Red Cross Society







Dr. Chandra Mohan

- Legal Awareness Award



Dr. Neeraj Kumari

- Special contribution in Social Initiative



Ms. Komal Yadav

- Best Program Coordinator at Haryana State Level by Red Cross Society
- Outstanding Performance towards Humanitarian Services by Indian Red Cross Society



# INDUSTRY AND PEER CONNECT: MOUs

Details



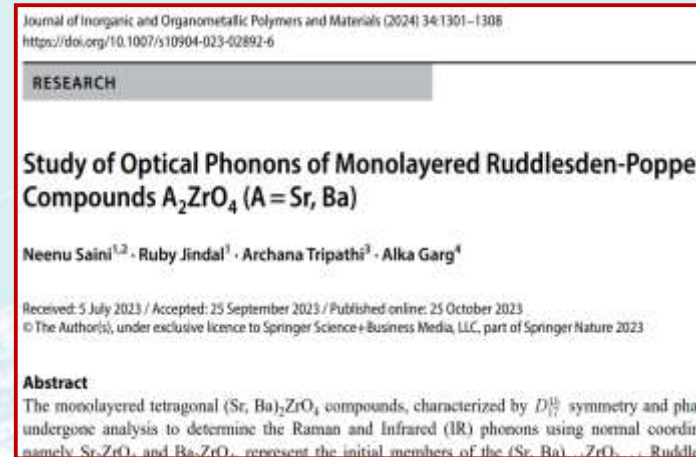
Collaboration



Internships



Resource Sharing



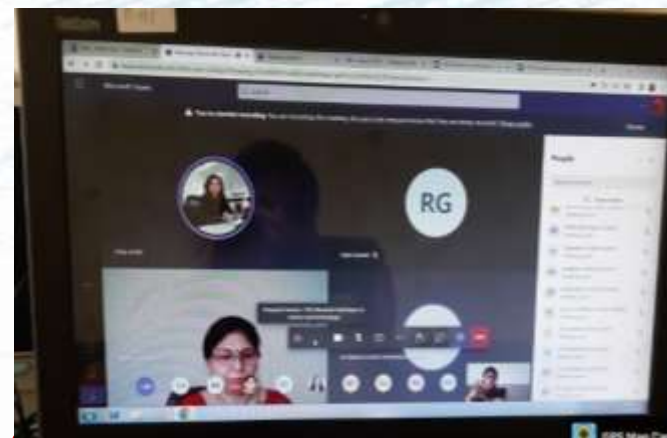
Research  
Publication



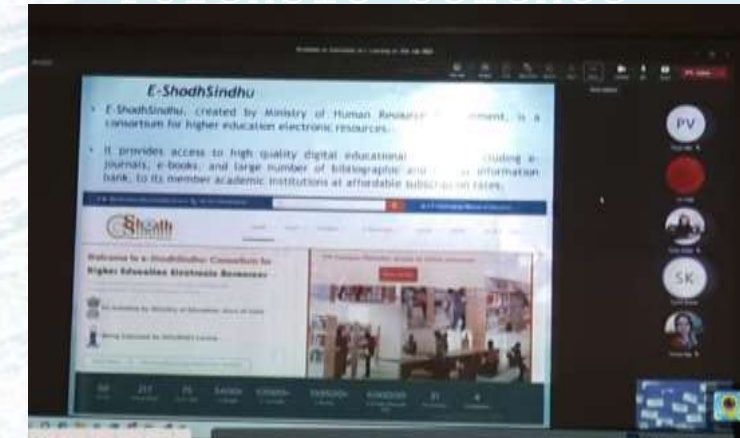
Education visit to  
Sherlock Institute of  
Forensic Science



Internship



FDP



Workshop on e-  
Toolbox



# INFRASTRUCTURE AND LEARNING RESOURCES

09

## CLASSROOMS AND LECTURE HALLS

Smart boards, modern seating and adequate lighting



## LABORATORIES:

Labs for different disciplines with up-to-date equipment and safety



06



Books

**LIBRARY**

:

Journal  
s

1607

11

Details

**PHYSICS LAB**



**CHEMISTRY LAB**



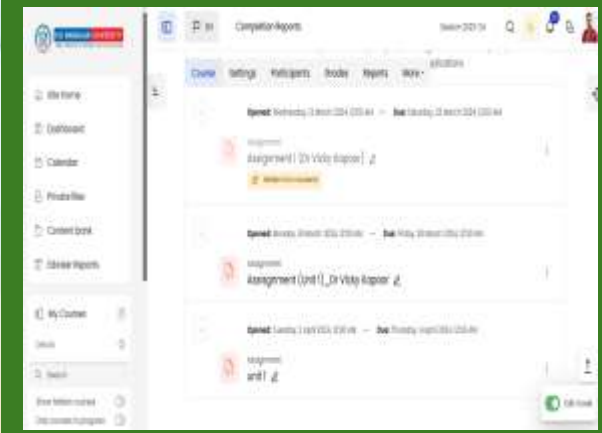
**FORENSIC SCIENCE LAB**



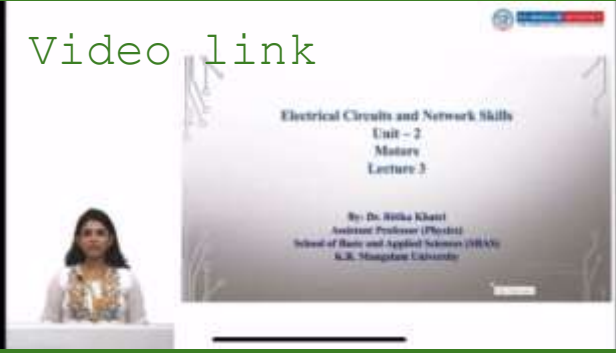
## LMS Moodle



S. No.	FACULTY NAME	SUBJECT
1.	Dr Seema Raj	Environmental Studies
2.	Dr Neeraj Kumari	Disaster Management
3.	Dr Ritika Khatri	Electrical Circuit & Network Skills
4.	Dr Mamta Raj	Engineering Chemistry
5.	Dr Sujata Kumari	Engineering Chemistry
6.	Dr Mehak Ahuja	Engineering Chemistry
7.	Dr Kirti Sharma	Engineering Calculus
8.	Dr Pardeep Kumar	Engineering Calculus
9.	Dr Nitish Yadav	Engineering Physics
10.	Dr Kriti	Engineering Physics
11.	Dr Vicky Kapoor	Engineering Physics



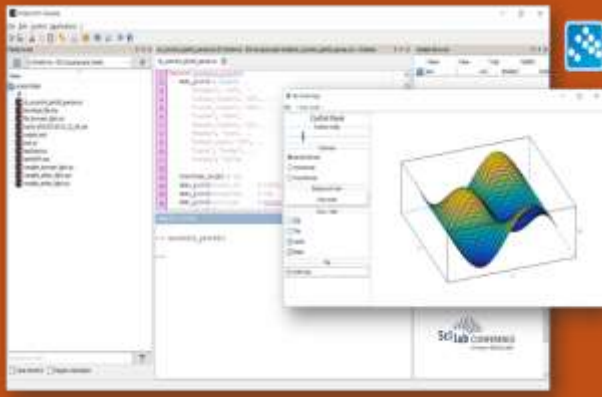
Video link



## Virtual Labs

Students can simulate experiments and gain practical experience remotely.

Scilab



## Central Instrumentation Facility

Instruments like UV-Visible, FTIR, TGA, DTA and DSC, LC Meter, Muffle Furnace dedicated to supporting research of UG, PG and PhD students.



# CAREER COUNSELING

## Efforts taken to provide career counselling including e-counselling and guidance for competitive examinations

Mentors and teachers provide career advise/counseling to the students as per their capability and interest

Career Counselling Sessions for preparation of Competitive Examinations ( JAM/NET/SSC)	8-Sep-18
Career Counselling webinars for GATE/ESE Preparation	14-Sep-19
Career Counselling webinars for GATE/ESE Preparation	8-Feb-20
A Webinar on How to Prepare for NET Exam	18-Aug-20
Exploring Career path - Virtual career counselling session	22-Aug-20
Training Session For Competitive preparation for all UG/PG Students	6-Jun-22
Coaching Classes for competitive exams (SSC, CGL, SSC CHGL, SSC CPO, SSC, JE)	9-Sep-22
An Interactive Session in On Career counselling for JAM/ NET	12-Sep-22
Coaching Classes for competitive exams such as SSC, CGL, SSC CHGL, SSC CPO, SSC JE Etc.	30-Sep-22
Coaching Classes for competitive exams such as SSC, CGL, SSC CHGL, SSC CPO, SSC JE Etc.	7-Oct-22
Coaching Classes for competitive exams such as SSC, CGL, SSC CHGL, SSC CPO, SSC JE Etc.	21-Oct-22
Career Counselling Session on Interview Preparation	7-Feb-23
Recruitment through coaching classes for competitive examination	24-Feb-23



Session on NET/JAM Preparation by Mr Aquib and Ms Parul ( Alumni) on June 23, 2023



Workshop on Career Counselling session Feb 7, 2023

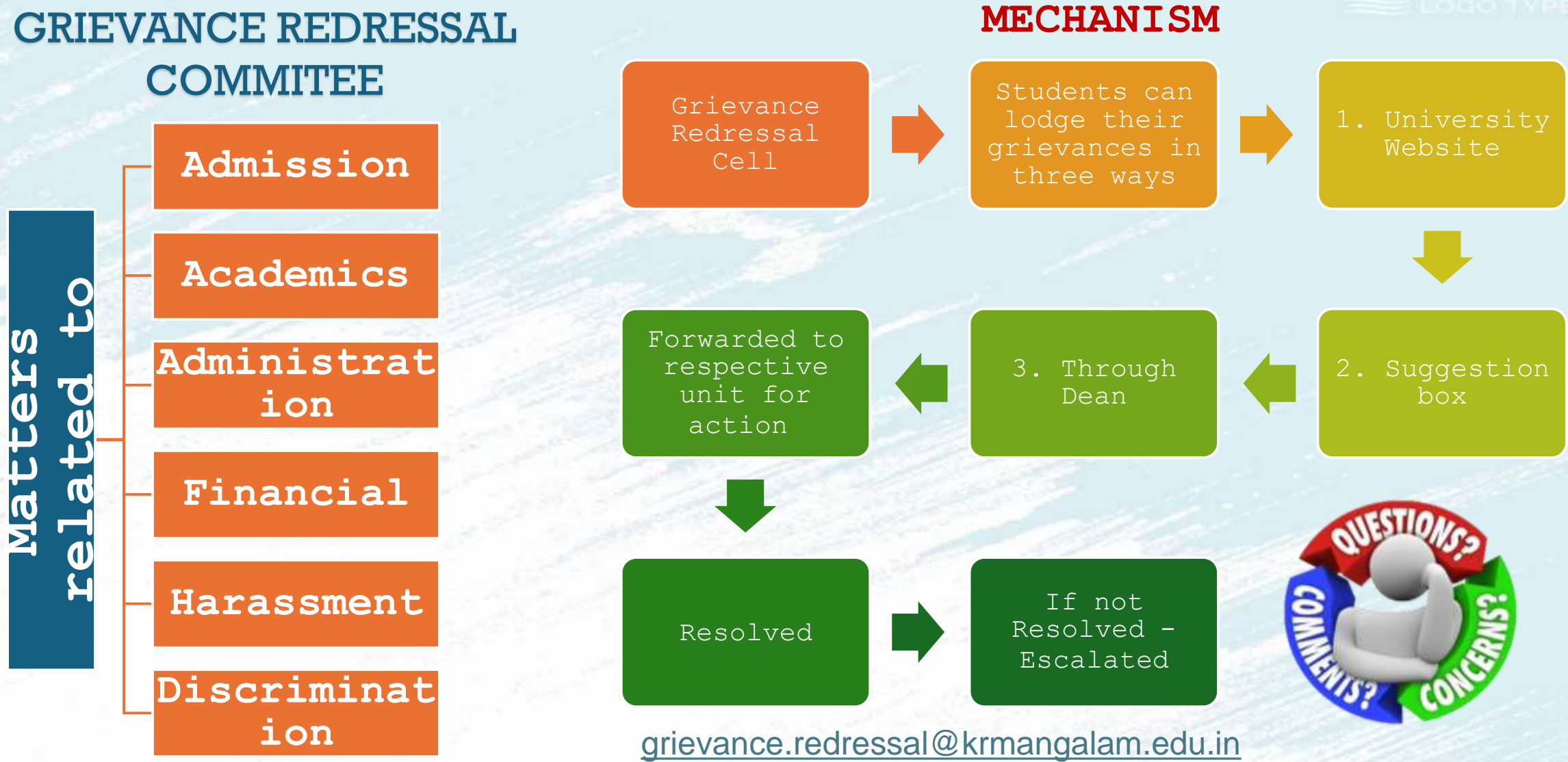


Session on NET/JAM Preparation by Dr. Neeraj Singh on Sept 12, 2022

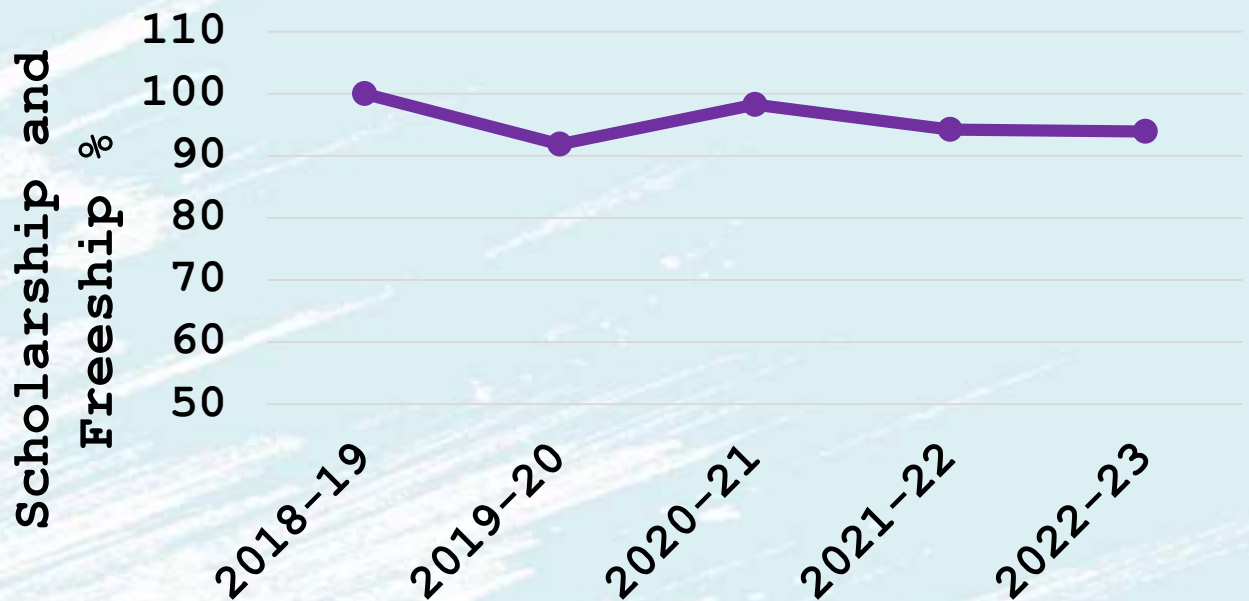
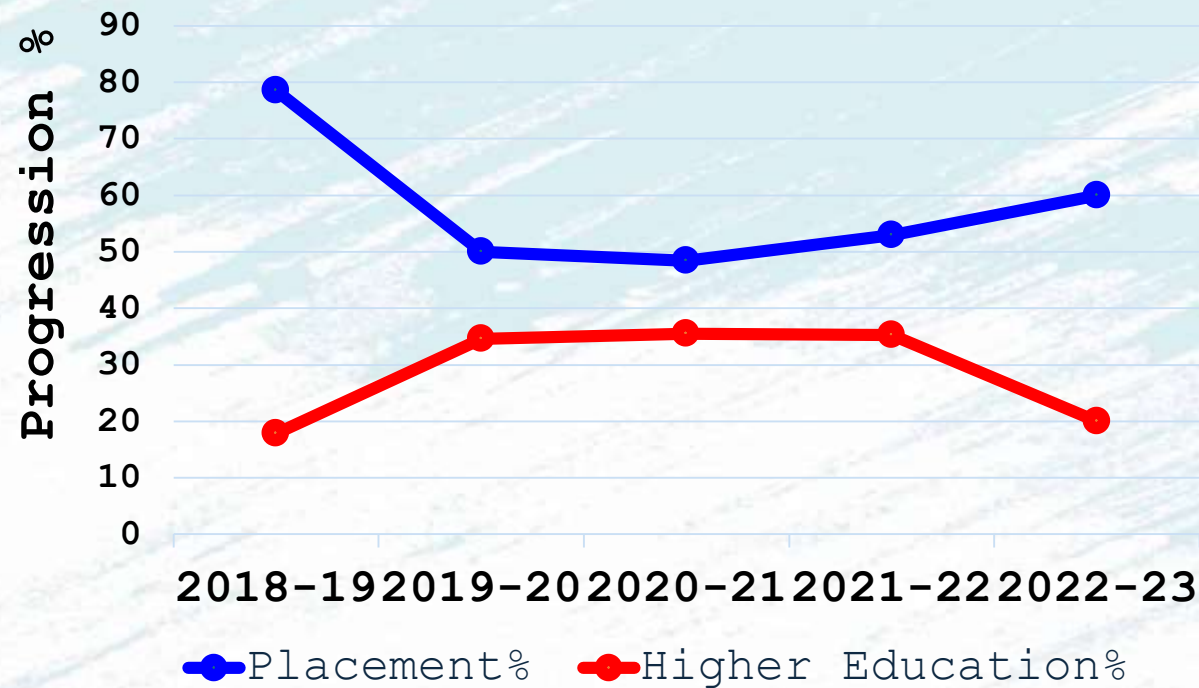


Training session for competition preparation on June 6, 2022





# STUDENT SUPPORT AND PROGRESSION





# ALUMNI CONTRIBUTION

## Star Alumni: Higher Education



**KANISHKA GUPTA**  
B.Sc.(H) Physics, 2021  
Masters of Physics in  
Quantum Computing  
University of Wisconsin  
Madison



**DIVYA SINGLA**  
B. Sc. (H) Chemistry, 2018  
IIT JAM Qualified (2018)  
M. Sc. IIT Delhi (2020)  
Ph. D., University of  
Connecticut, USA  
(Pursuing)



**MANOJ KUMAR**  
B. Sc (H) Chemistry,  
2018  
M. Sc. Chemistry, 2020  
Ph.D. Ruhr University  
Bochum, Germany  
(Pursuing)



**DIKSHA BOKEN**  
B. Sc (H) Chemistry,  
2020  
Master of Public  
Administration in  
Environmental Science  
and Policy, Columbia  
University, New York

## Alumni Interactions



Declamation on skills required in  
corporate world  
Date: 12 October 2022  
Resource Person: Ms. Ashu  
Berwal



Alumni Great Story Begins here  
Date: 27 September 2023  
Resource Person: Mr. Agnivesh



**ASHU BERWAL**  
B. Sc (H) Chemistry, 2020  
Junior R & D Scientist Biointeraction  
Vedantu Innovations, Pune  
Company UK

## Star Alumni: Placement



**PRABHAT KUMAR PAL**  
B. Sc (H) Physics, 2020  
Executive Telesupply  
Spinny, Gurugram



**LAVANYA JOSHI**  
B. Sc (H) Physics, 2018  
Senior Marketing Manager  
Reports and Insights, Noida



**DEEPAK**  
B. Sc (H) Mathematics, 2018  
Junior Analyst  
GFK Mode Pvt. Ltd, Gurugram



**AQUIB AAMIR**  
B. Sc (H) Physics, 2017  
Physics Faculty



**ANKITA KARIR**  
B. Sc (H) Chemistry, 2020  
Research Analyst  
TechSci Research, Noida



**PRIYA YADAV**  
B. Sc (H) Chemistry, 2018, M.Sc.  
Chemistry 2020  
Compliance Engineer  
Markek International, Gurugram



# STUDENT AWARDS



SBAS students-Group Singing Competition, 21 March 2023



B. Sc. (H) Physics 2nd Year  
Annual Fest Ideathon  
G D Goenka University



B. Sc. (H) Forensic Science 2nd Year  
Summer Internship Competition  
Sushant University



Prakriti-Speech  
Competition, 7 Nov 2022



Aryan Bajaj  
B. Sc. (H) Physics  
Incubated at KEIC for his start-up



# STUDENT COUNCIL MEMBERS

2024-25



Amrit Anand  
B.Sc. (H) Physics

2021-22



Aarti Gangadhar  
Shinde  
B.Sc. (H) Chemistry

2021-22



Kanishka Gupta  
B.Sc. (H) Physics

2020-21



Deepshikha Jain  
M.Sc. Chemistry

2020-21



Gourav Kumar Singh  
B.Sc. (H) Mathematics

2019-20



Monika Yadav  
M.Sc. Mathematics

2019-20



Ajay Soni  
B.Sc. (H) Chemistry

2018-19



Sujeet Yadav  
B.Sc. (H) Mathematics

2017-18



Pooja Singla  
M.Sc. Physics

2017-18



Monika Yadav  
B.Sc. (H) Mathematics

2017-18



Divya  
B.Sc. (H) Chemistry



# CO-CURRICULAR ACTIVITIES



Painting  
competition



Tattoo making



Movie screening



Music and  
drama

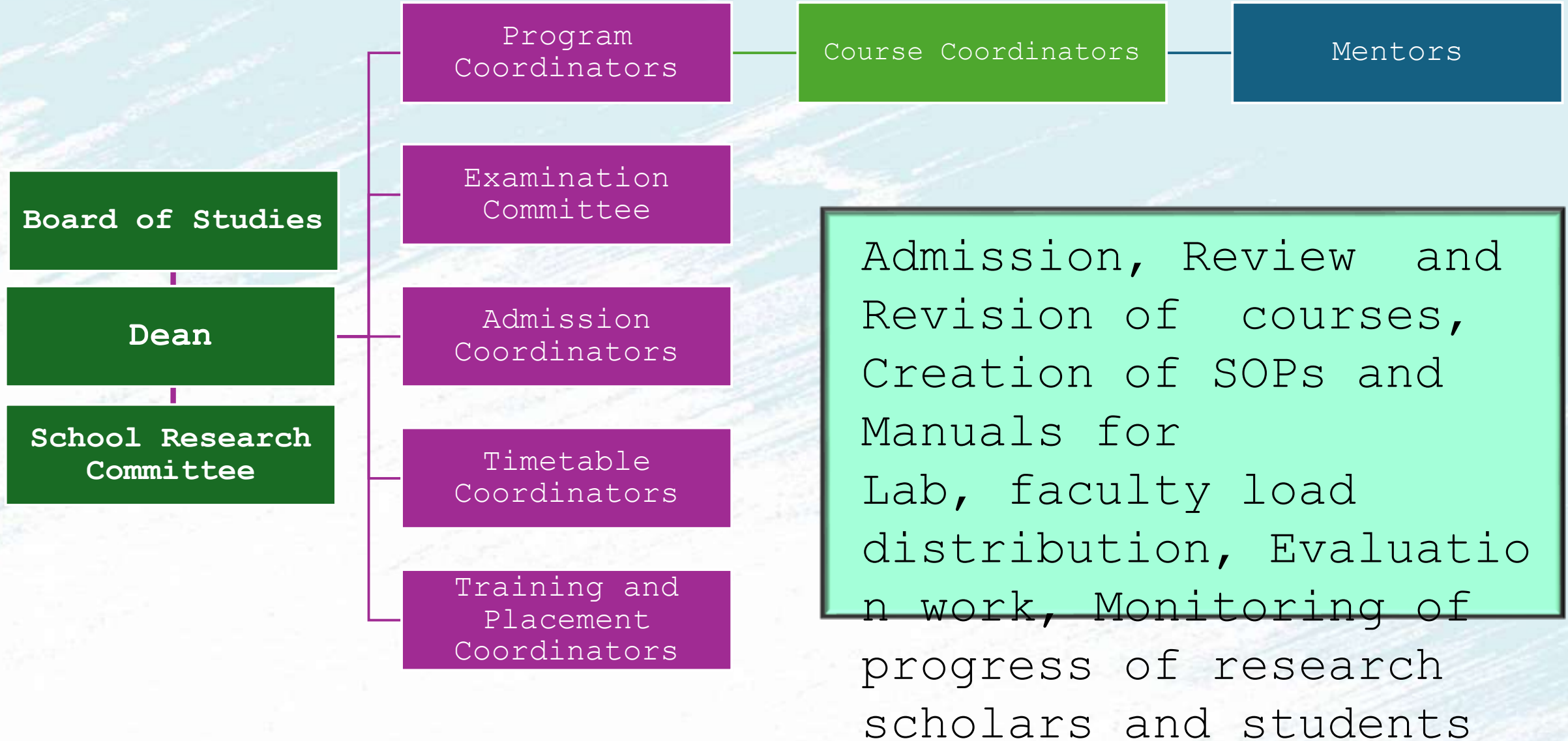


Poster making



Nukkad natak

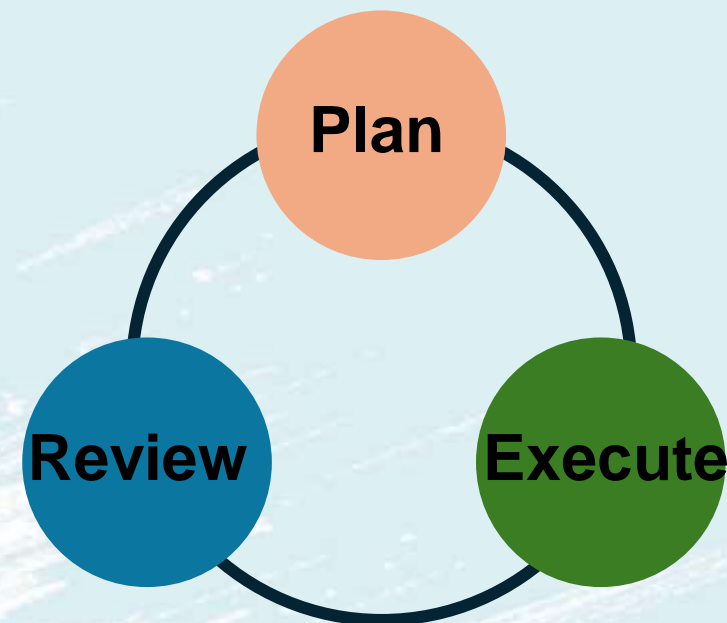




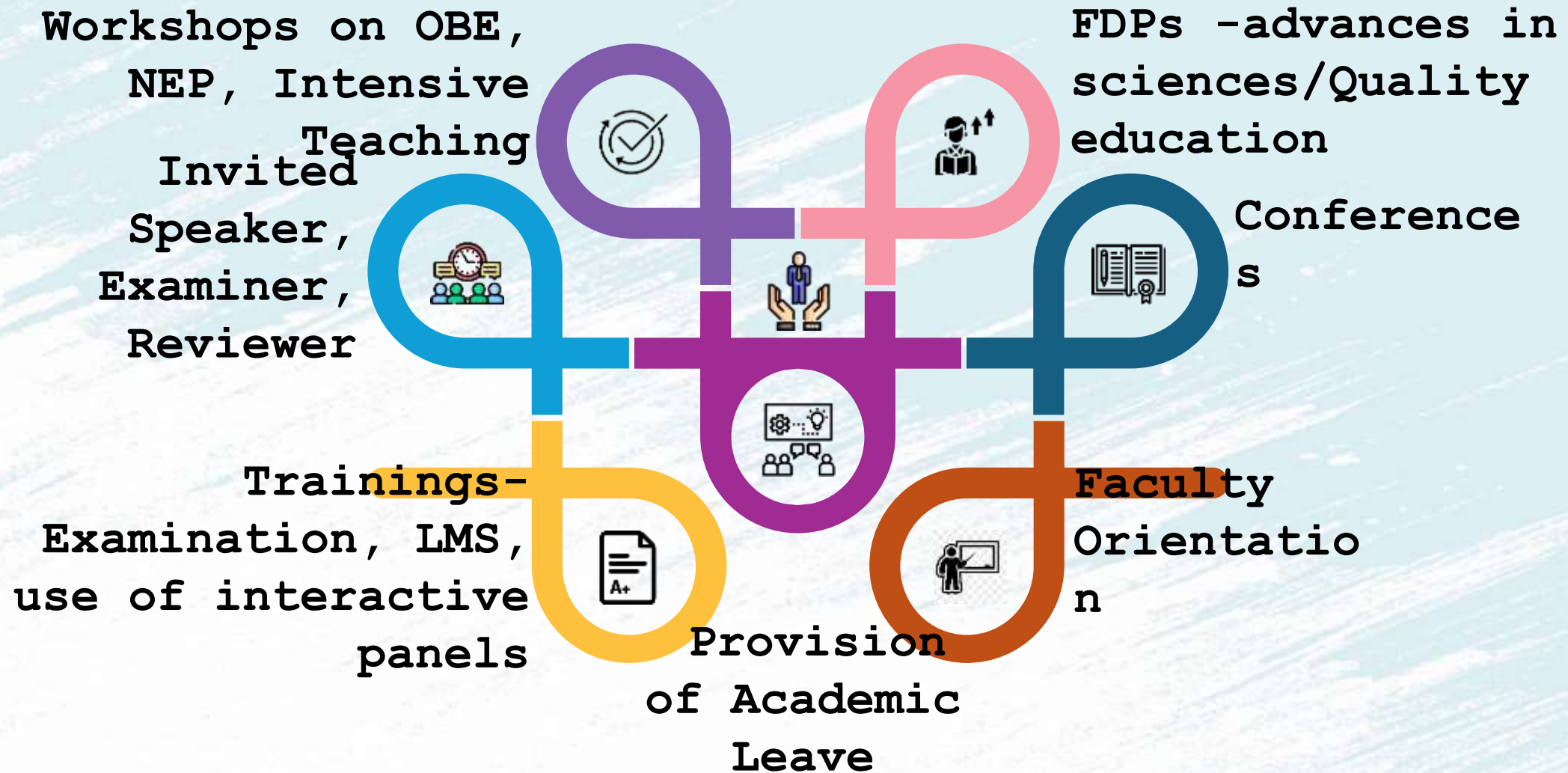
As per strategic plan of the university,

## **Curriculum Enrichment, Research Excellence, Intellectual Capital, Collaborations, Placements, Rankings**

- ☐ Plan for new programs, review and revision of curricula
- ☐ Calculation of requirement of School before the start of semester/session
  - Man -Power Requirement: Faculty and Non- Teaching Staff
  - Infrastructure
  - Lab Instruments
  - Lab Apparatus and Chemical
- ☐ Recruitment of Faculty and Staff
- ☐ Purchase of lab equipment, consumables etc.
- ☐ Planning for organization of Conferences/ FDP/Seminars for Faculty
- ☐ Preparation of Experiential Calendar including career counselling for students
- ☐ Conduct School Research Committee Meeting
- ☐ Constitution of Committees
- ☐ Designing of SOP and Formats for efficient functioning
- ☐ Review Meetings



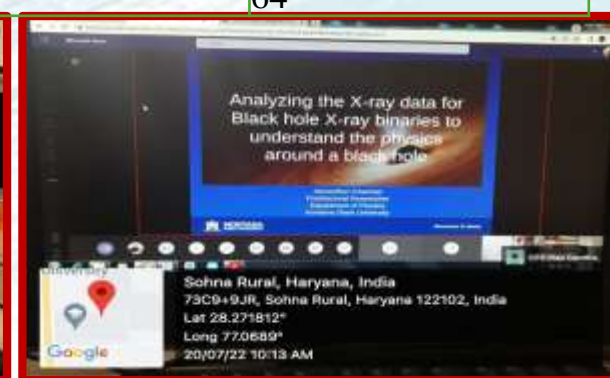




# FDPs ORGANIZED(7)

- Average Number of faculty attended FDPs: (~77%)
- Average Number of faculty received Financial Support (~68%)

FDPs organized			
Year	Dates	Title of the Faculty Development Program	No. of participants
2020-21	13-07-2020 to 17-07-2020	Advancements in Science and Technology for Sustainable Development	55
2021-22	09-08-2021 to 13-08-2021	Recent Advancements in Science and Technology	45
2022-23	18-07-2022 to 23-07-2022	Research Techniques in Science and Technology in collaboration with Gargi College, University of Delhi	100
2022-23	27-07-2022 to 02-08-2022	New Reforms in Higher Education with reference to NEP 2020 with CTEF	298
2022-23	26-12-2022 to 31-12-2022	Modern scientific technologies - Ways to enhance research skills in association with Hans Raj College, University of Delhi	235
2023-24	27-05-2024 to 01-06-2024	Fabrication and Characterization of Nanomaterials for Device Applications in collaboration with Hansraj College	60
2024-25	19-05-2025 to 24-05-2025	Imperatives of Indian Knowledge System	64





# GENDER AUDIT AND PROMOTION OF GENDER EQUALITY

❑ Faculty	Male: 18 Female: 26	[1:1.4]
❑ Students	Male: 108 Female: 181	[1:1.6]

## Measures for Promotion of Gender Equality FACILITIES

1. Girls Common Room
2. CCTV cameras
3. Female Doctor
4. Transport Facility
5. Faculty Lounge
6. Sanitary Napkin Vending Machine and Incinerator



Diagnosis of problem in women and their cure on June 6, 2022



Women's day celebration on March 8, 2020



Nukkad Natak on Female Foeticide on September 9, 2022



Seminar on Education: A Tool for Awareness on Gender Equality on April 6, 2023





**Restricted entry  
of automobiles**



**Use of  
bicycles/battery-  
powered vehicles**



**Pedestrian  
friendly pathways**



**Landscaping with  
trees and plants**



**Plastic-free  
campus**



**CNG university  
buses and cars**



**Energy Saving  
Initiatives: Use of  
Solar panels**



**Activities to  
promote Green  
Campus**



# GREEN CAMPUS INITIATIVES





# INCLUSIVE ENVIRONMENT



Tolérance and harmony towards cultural, regional, linguistic, communal socioeconomic and such other diversities

LOGO TYPE



Competition on "Share Our Similarities and celebrate Our Cultural Differences" June 1, 2023



Inter University Event- 'Hindi Meri Pehchan: Debate Competition'. November 24, 2022



Inter University Competition: poster making competition- Jhalak of Indian Culture through Poster making. November 23, 2022



A session on fundamental rights of duties of Citizens on June 7, 2023



Seminar on "Professional Ethics and their implication in life" for students on February 25, 2023



Seminar on "Professional Ethics and their implication in life" for students on May 16, 2023



Code of Conduct and Professional Ethics for teachers on Feb 25, 2023.



Seminar on Phishing Emails & Detection of forgery in white collar Crimes Feb 23, 2023



Training Program for spreading awareness about the code of conduct and professional ethics August 30, 2022



Training program for spreading awareness about the code of conduct and professional ethics August 16, 2022





# BEST PRACTICE

## Innovating for Environmental Impact and Sustainability

### Courses on Environment:

- Green Processes of Chemistry
- Environmental Studies
- Disaster Management etc.
- Environmental consciousness through organization of activities
- Tree plantation drives
- Research Publications

- Wastewater treatment** using photocatalytic degradation of dyes
- Water remediation**
- Developing constructive blocks using **flyash** and other waste materials
- Removal of heavy metals from water etc.
- Air Quality**

Removal of Dyes from Water bodies using Activated Charcoal



Preparation Of Biodegradable Polymer Films Using Starch



Students taking oath to preserve environment on June 5, 2018

# ENVIRONMENTAL INITIATIVES



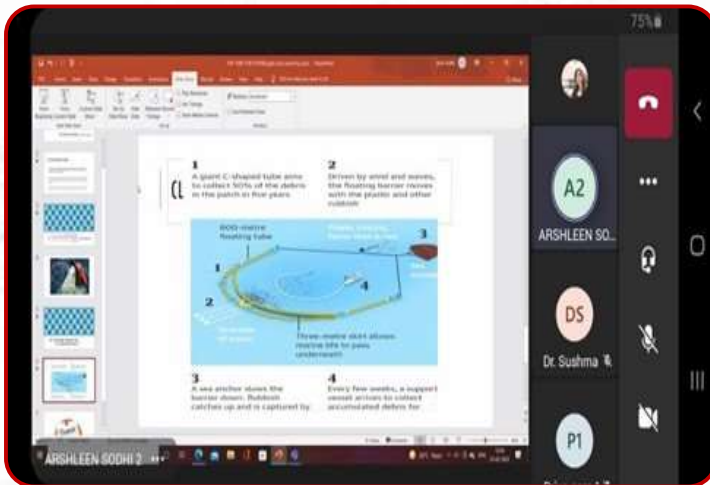
Recycle for Lifecycle – Feb 22, 2022



Awareness Session of E-Waste Management Feb 3, 2020



Air We breathe, Sept 2, 2022



Envirothon- Ideas for protection of environment on Feb 25, 2022



Best out of waste, 2018

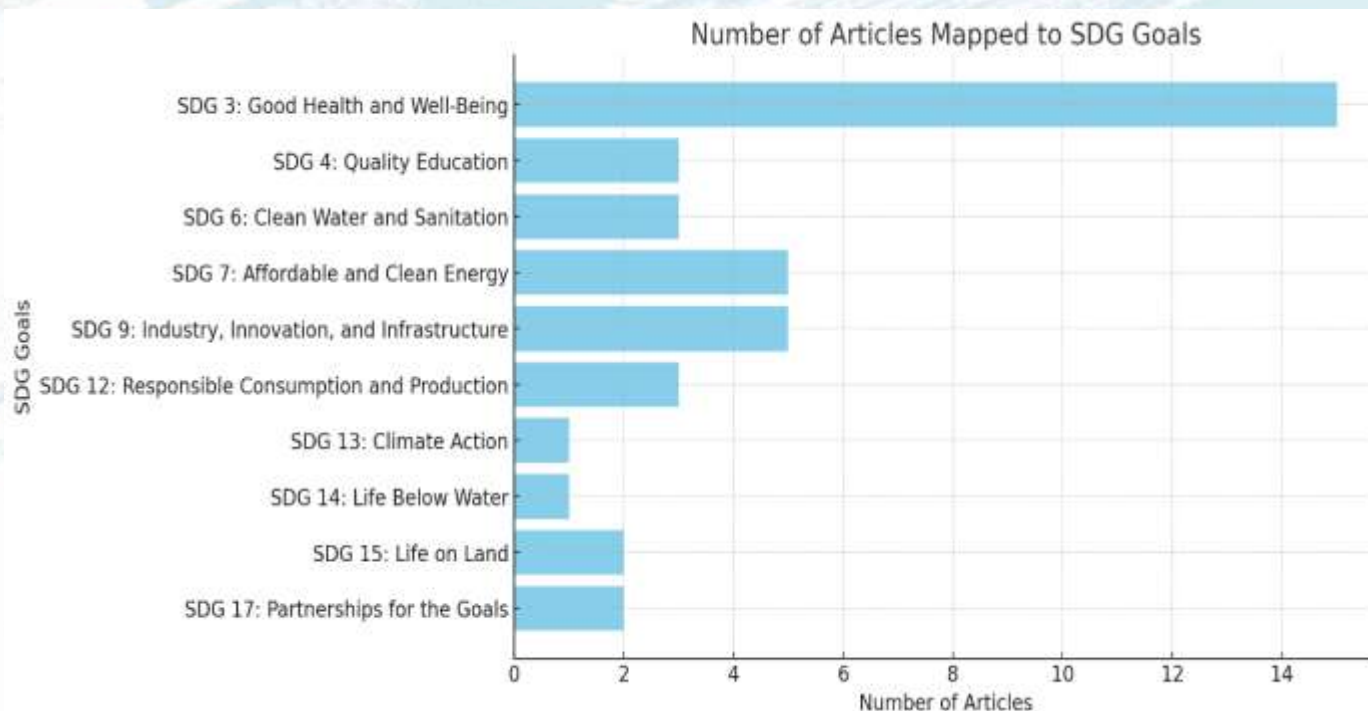


Webinar on Basic Concepts of Climate Modeling on June 24, 2021



# SUSTAINABLE DEVELOPMENT GOALS (SDGs)

- ❑ Alignment of Activities in the Experiential Calendar with SDGs = **(Quality Education-SDG 4, Decent Work and Economic Growth-SDG 8, Industry, Innovation and Infrastructure-SDG 9)**
- ❑ Research Scholars working on sustainability= **15**
- ❑ Conference on Advanced Materials for Green Chemistry and Sustainable Environment in 2024 and 2025 = **SDG-9, 12, 13**
- ❑ Research Articles on sustainability- **30**



# BEST PRACTICE Learning through Social Outreach

Details

Activities Organized: **10**  
Case studies: **3**



## Case Studies (2022 – 24)

1. Literacy Program for Women at Lakhuwas Village (20 volunteers; 60 villagers)
2. Case study on De-addiction Activity through Survey and De-addiction Campaign at Ghamroj Village (63 volunteers; 96 families)
3. Effect of Electronic Devices on Education of Students of Abhaypur and Dhaula Village ( For class 9-12 students) (50 volunteers, 600 school students)





# DISTINCTIVENESS Experiential Learning through Projects

LOGO TYPE

## Engineering Kitchen

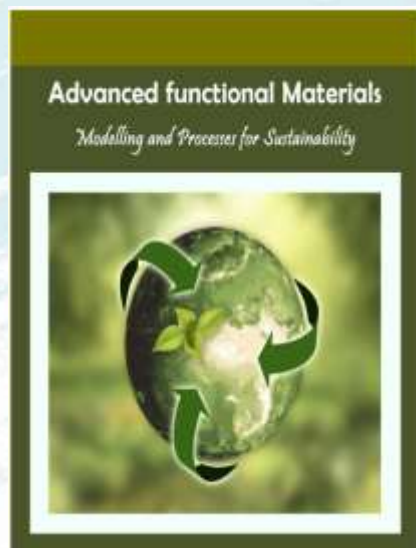


- Experiments on **Crystal Growth** from 'MELT'
- Development of whisker **crystals of potassium chloride (KCl)**
- Innovative low-cost technique for fabrication of thermocouples
- Designing a **furnace** for high temperature up to approximately 1000 °C using local materials like mud as an insulator material
- Designing a **professional crystal growth system** using local and waste material.
- **Membrane distillation** and **Construction Materials**

Focal point to students and faculty especially interested in innovation, and entrepreneurial activities.

Publication: [Indian Journal of Pure & Applied Physics](#), Vol. 59, October 2021.

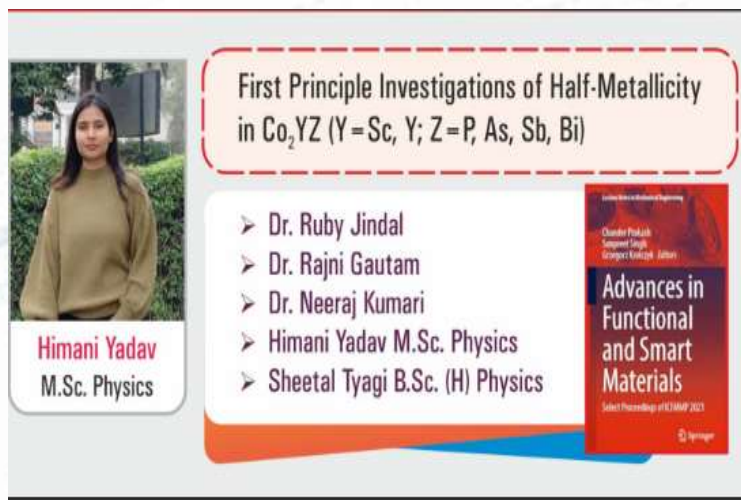
# DISTINCTIVENESS Experiential Learning through Projects



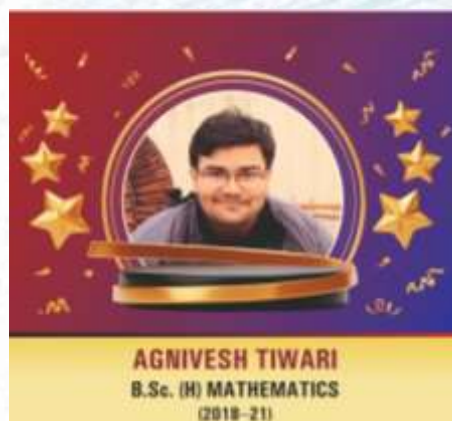
Synthesis of Geo polymer



Assessment of Air Quality Index in rural and urban areas- Jan 2020



Student publication



Area of research: Air pollution

## Field Project:

Analyzing  $\text{NO}_x$ ,  $\text{SO}_x$ ,  $\text{PM}_{2.5}$ ,  $\text{CO}$ ,  $\text{CO}_2$ ,  $\text{PM}_{10}$  in Rural and Urban Areas ( Jeetika, Amrit, Ronak, Chandan and Muskan) November 2022

UG/PG Publications/Presentations: **21** [Details](#)



# DISTINCTIVENESS

## Experiential Learning through Projects etc.



**SCIZONE-2018**



**SCIZONE-2018**



**SCIZONE-2018**



**SCIZONE-2019**



**Inter-University  
Competition, SCIENCE –  
EXHIBIT – December 2022**



**Inter-University Competition,  
SCIENCE – EXHIBIT –  
December 2022**



**SCIZONE-2019**



**Innovation for Sustainable  
Future, Feb 2023**



# A Way Forward.....

2025-26

- Promotion of research and innovation amongst undergraduate students
- ~2 Quality research publications/faculty

2026-27

- Initiate new programmes
- Enhance student readiness for higher studies and careers
- Incubated startups

2027-28

- Apply for government and private research grants
- Collaborate with industries and international organization for projects and internships etc.
- ~4 Quality research publications/faculty



# Thank You!