

# THE EDGE

AN ANNUAL NEWSLETTER

DEPARTMENT OF APPLIED SCIENCES

The AS-NEWSLETTER is an annual newsletter of the Department of Applied Sciences, Galgotias College of Engineering and Technology, Greater Noida. It mirrors the activities/ events organized by the Department and pinnacles the accomplishments of students and faculty members in research and other expanses during the academic session.

## EDITORIAL TEAM



**Professor (Dr) RAJESH TRIPATHI**  
**CHIEF EDITOR**



**Dr ANSAR ANJUM**  
**EDITOR**

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## CHIEF EDITOR'S NOTE

Dear Readers,

It is indeed a great honor to be the Chief Editor of the Newsletter of Department of Applied Sciences, Galgotias College of Engineering and Technology, Greater Noida and with immense pleasure we launch the “AS-Newsletter” for the session 2021-22.

In this issue, we recount the myriad activities and events in which the faculty members, staff and students related to the Department were actively involved during the academic session of 2021 - 2022. Some of the areas covered in this issue will be the research and development and awards won by faculty members and students, activities of committees and clubs of the department, recognition of our faculty members and students by various organizations and the contribution of our department in the overall growth of our institution.

I am indebted to all the persons who contributed in the successful edition of this issue.

Last but not the least, I would like to thank our Honorable Chairman Shri Suneel Galgotia, Honorable CEO Mr. Dhruv Galgotia, Director-GCET Dr. Mohd. Asim Qadri and the Editor of this newsletter Dr. Ansar Anjum for everlasting support throughout the creation of this edition.

Professor (Dr) Rajesh Tripathi

## FROM THE HEAD OF DEPARTMENT

The department of Applied Sciences plays an important role in the core curriculum of the institution. It oversees the teaching of the subjects Physics, Chemistry and Mathematics to all courses of the Institution. The highly qualified faculty and staff members enthusiastically work together to prepare a new generation equipped with strong



quantitative and analytical skills to meet the competitive demands of the current job market. As the department is majorly associated with first year students therefore, special attention is given to familiarize them with environment of the institution and inculcate ethical learning practices in them. The department concentrates on the welfare of both the students and the faculty members. This is achieved by organizing seminars, special lectures, interactive activities and induction program for students and many Faculty Development Programs, Seminars and Conferences for faculty members. In addition to all the work, faculty members also devote their time for research work in collaboration with the various research institutes.



## **VISION OF INSTITUTE**

To be a leading educational institution recognized for excellence in engineering education and research producing globally competent and socially responsible technocrats.

## **MISSION OF INSTITUTE**

- To provide state-of-art infrastructural facilities that support achieving academic excellence.
- To provide a work environment that is conducive for professional growth of faculty and staff.
- To collaborate with industry for achieving excellence in research, consultancy and entrepreneurship development.

## **VISION OF DEPARTMENT**

To be a center of excellence in education in the field of physics, chemistry, mathematics and other related interdisciplinary sciences with ethical and social values.

## **MISSION OF DEPARTMENT**

- To provide quality education by providing state of the art facility.
- To educate the students by giving them a blend of knowledge of applied and interdisciplinary sciences.
- To make students conscious of ethical and social values in pursuing their education and profession.

## RESEARCH SECTION OF THE DEPARTMENT



Publications in Journals/ Conference Proceeding during 2021-22

1. **Rajeev Kumar Mishra (2022) Mathematical modeling of semitransparent photovoltaic thermal(spvt) system with different packing factors: an experimental validation. Journal of Thermal Engineering, 8, 2 .(Article in Press)**
2. **Bidyut Mallick (2022) TN strain proteome mediated therapeutic target mapping and multi-epitopic peptide-based vaccine development for Mycobacterium leprae. Journal, Infection, Genetics and Evolution, 99, 105245.**
3. **Bidyut Mallick (2022) Antiferromagnetically coupled double perovskite as an efficient and robust catalyst for visible light driven water splitting at neutral pH. Physical Chemistry Chemical Physics, 24, 8, 5083-5093.**
4. **Rajesh Tripathi (2022) Effect of various materials used for semitransparent solar panel fitted at roof top of a building. Materials Today: Proceeding, 57, 5, 2067-2072.**
5. **Rajendra Prasad (2022) Electro-optical, electronic and conformational transitions of interstellar alkyl molecules at different temperatures: An ab-initio study. Current Research in Green and Sustainable Chemistry, 5, 100235, 8, Elsevier, Amsterdam, Netherlands.**
6. **Rajeev Kumar Mishra (2022) Typical expression of double slope distiller unit incorporated with PVT-CPC. Materials Today: Proceedings, 57, 5, 1955-1961.**
7. **Rajeev Kumar Mishra (2022) Exergetic analysis of semi-transparent photovoltaic Thermal Module. Materials Today: Proceedings, 57, 5, 2289-2294.**
8. **Pankaj Pathania (2022) Systematic investigation of transition metal nitrides (ZrN,TiN) based plasmonic multilayered core-shell nanoparticle for sensing, , GCET, Materials Today: Proceedings, 57, 5, 2285-2298.**
9. **Smriti Dwivedi (2022) Molecular docking and antimicrobial analyses of synthesized imidazole derivatives in solvent less condition, adjacent to human pathogenic bacterial strains. Materials Today: Proceedings, 38, 1-5.**
10. **Dushyant Kumar (2022) Composite Character of Fibonacci and two other Recursive sequences. Conference Proceeding, AIP, 2435, 020056.**
11. **Padam Singh (2022) Effect of heat and mass transfer in nanofluid flow along a vertical thin needle. Conference Proceeding, IEEE, 57, 5, 2276-2280.**
12. **Padam Singh (2022) Optimization of EDM process parameters for TWR on machining of Inconel 600 superalloy using Taguchi approach. Conference Proceeding, Materials Today: Proceedings, 57, 5, 2281-2288.**
13. **Padam Singh (2022) Free Convective Heat Transfer with Boundary Slip Flow in a Nanofluid Along a Stretching Cylinder. Conference Proceeding, Recent Trends in Thermal Engineering, 113-123.**
14. **Virender Singh (2022) A note on Discrete q-Modified Hermite polynomials of Type-. Conference Proceeding, Materials Today: Proceedings, 57, 5, 2140-2143.**
15. **Rajeev Kishore, Indu Tyagi and Deepak Kumar (2022) Epidemic Model on Rumor Propagation in e-Commerce. Conference Proceeding, Materials Today: Proceedings, 57, 5, 2056-2060.**

## RESEARCH SECTION OF THE DEPARTMENT



Publications in Journals/ Conference Proceeding during 2021-22

16. Virender Singh (2022) Certain properties and their Volterra Integral equation associated with the second kind Chebyshev matrix polynomials in two variables. Conference Proceeding. *(Accepted)*
17. Pratap Kumar, Rajeev Kishore and Rajendra Prasad (2021) Stumpy-Paced Green Power Generation System. Conference Proceeding, Institute of Electrical and Electronics Engineers, IEEE, 978-1-6654-1429-6, 2021, , 351-355.
18. Savita Verma (2021) Shape memory polymers for additive manufacturing: An overview. *Materials Today: Proceedings*, 57, 5, 2077-2081.
19. Savita Verma (2021) Machine learning applications in healthcare sector An overview. *Materials Today: Proceedings*, 57, 5, 2144-2147.
20. Padam Singh (2021) Introduction: Optimization and Metaheuristics Algorithms. Book Chapter, *Metaheuristic and Evolutionary Computation: Algorithms and Applications*, 916, 3-33.
21. Manju Kashyap (2021) Performance characteristics and assessment of fire alarm system. Conference Proceeding, *Materials Today: Proceedings*, 57, 5, 2036-2040.
22. Rajendra Prasad (2021) Fabrication of an efficient green sensitive photopolymer for holographic applications. Conference Proceeding, *Materials Today*, 57, 5, 2031-2035.
23. Rajendra Prasad (2021) Constraining a bulk viscous Bianchi type I dark energy dominated Universe with recent observational data. *Physical Review D*, 104, 64044, 13, The American Physical Society (APS).
24. Bhawna Gupta (2021) On singular surface theory to study steepening of waves in non-ideal magnetogasdynamics. *Ricerche di Matematica*, 71, 253-263.
25. Smriti Dwivedi and Monika Mallik (2021) Behavioural Change During COVID-19 Lockdown and finding ways to improve Mental Health in the state of Uttar Pradesh, India. *Journal of Chengdu University of Technology*, 26, 7, 299-307, Chengdu Institute of Technology.
26. Monika Mallik (2021) Analysis of H-bonded molecular association in formamide with alcohols. *Materials Today: Proceedings*, 57, 5, 2096-2102.
27. Gaurav Aggarwal (2021) Some Convergence Theorems for Monotone Nonexpansive Mappings in Hyperbolic Metric Spaces. *Thai Journal of Mathematics, International*, 19, 4, 1651-1659, Mathematical Association of Thailand.
28. Gaurav Aggarwal (2021) Convergence theorems for sp -iteration scheme in a ordered hyperbolic metric space. *Nonlinear Functional Analysis and Applications*, 26, 5, 961-969.
29. Anuradha Saha (2021) Covid 19- Transmission, Epidemiology, etiology, treatment and Clinical Trials. *Journal of Pharmaceutical Research International*, 33, 60B, 705-714.
30. Anuradha Saha (2021) The Prevalence of SARS-CoV-2 in sewage waste water: a review. *Journal, Indian journal of Microbiological Research, National*, 8, 3, 185-190, Innovative Education and Scientific Research Foundation.
31. Bipin Kumar Srivastava (2021) Relative stability and species formation of Zn(II) ternary complexes involving L-Tryptophan, L- Citrulline, L-Glutamine with biologically active nucleobases Uracil and Thymine in solution. *Materials Today: Proceedings*, 57, 5, 2116-2120.

## RESEARCH SECTION OF THE DEPARTMENT



Conferences attended/ paper presented by faculties during 2021-22

Name of Faculty	Category of Conference	Details of Conference
<b>Dr Rajesh Tripathi</b>	International	"International Conference on Innovation and Application in Science & Technology", GCET, UP
<b>Dr Pankaj Pathania</b>	International	"International Conference on Innovation and Application in Science & Technology", GCET, UP
<b>Dr Padam Singh Tomar</b>	International	"International Conference on Innovation and Application in Science & Technology, GCET, UP
	International	"International Conference on "Contemporary research on Mathematics and Computer Sciences", SRMS CET, UP
	International	3rd international Conference on "Frontiers of Science and Technology as reviewer, KIET, UP
<b>Dr Pratap Kumar</b>	International	3rd IEEE International Conference on Advances in Computing, Communication Control and Networking
	International	"International Conference on Innovation and Application in Science & Technology, GCET, UP
<b>Dr Deepak Kumar</b>	International	"International Conference on Innovation and Application in Science & Technology, GCET, UP
<b>Dr Rajeev Kishore</b>	International	"International Conference on Innovation and Application in Science & Technology, GCET, UP
	International	"International Conference on Contemporary Research on Mathematics and Computer Science"
<b>Dr Virender Singh</b>	International	"International Conference on Innovation and Application in Science & Technology, GCET, UP
	International	"International Conference on FIAM", SLIET Longowal, Punjab



## RESEARCH SECTION OF THE DEPARTMENT



Conferences attended/ paper presented by faculties during 2021-22

Name of Faculty	Category of Conference	Details of Conference
Dr Manju Kashyap	International	"International Conference on Innovation and Application in Science & Technology, Galgotias College of Engineering and Technology, UP
Dr Rajeev K. Mishra	International	"International Conference on Innovation and Application in Science & Technology, Galgotias College of Engineering and Technology, UP
Dr Monika Malik	International	"International Conference on Innovation and Application in Science & Technology, Galgotias College of Engineering and Technology, UP
	International	"International Conference 9 th Asian Network for Natural & Unnatural Materials (ANNUM-9), University of Delhi, Delhi
Dr Bipin K. Srivastava	International	"International Conference on Innovation and Application in Science & Technology, Galgotias College of Engineering and Technology, UP
Dr Savita Verma	International	International Conference on Innovation and Application in Science & Technology, GCET, UP

## RESEARCH SECTION OF THE DEPARTMENT



### FDP/ Workshop/ Refresher/ Seminars/ attended by faculty members during 2021-22

Name of faculty member	Duration	Details of FDP/ Workshop/ Refresher/ Seminar attended
Dr Rajesh Tripathi	7 Jan 2022	Webinar on "Outcome Based Education (OBE)"
	27 Jan 2022	Webinar on "Exploring happiness from the universal human value education perspectives"
	7-11 Feb 2022	FDP on Emerging trends in Data Analytics
Dr Dushyant Kumar	23-28 May 2022	FDP on "Role of Optimization in computational Mathematics, Supply Chain Management & Engineering"
	7-11 Feb 2022	FDP on "Outcome Based Education"
	16 Mar 2022	Webinar on "World Recycling Day"
	16 Feb 2022	Webinar on "Neural Engineering for Medical and Health Care"
Prof.(Dr) Pratap Kumar	7-11 Feb 2022	FDP on "Outcome Based Education"
	16 Feb 2022	Webinar on "Neural Engineering for Medical and Health Care"
Dr Padam Singh Tomar	18 Nov 2021	Webinar on "A walk through of Taylor and Francis Journals and e-books"
	30 Oct 2021	Workshop on "Technical Documentation using LaTeX"
	7-11 Feb 2022	FDP on "Outcome Based Education"
	16 Mar 2022	Webinar on "World Recycling Day"
Dr Deepak Kumar	16 July 2021	Webinar on "Design Thinking and Innovation Management for Green Technology, Entrepreneurship"
	7-11 Feb 2022	FDP on "Outcome Based Education"
Dr Rajeev Kishore	16 July 2021	Webinar on "Design Thinking & Innovation Management for the Green Technology, Entrepreneurship"
	31 July 2021	The Importance of Virtual Laboratory and Quality of Education in the Pandemic Scenario

## RESEARCH SECTION OF THE DEPARTMENT



FDP/ Workshop/ Refresher/ Seminars/ attended by faculty members during 2021-22

Name of faculty member	Duration	Details of FDP/ Workshop/ Refresher/ Seminar attended
<b>Dr Virender Singh</b>	16 Feb 2022	Webinar on "Neural Engineering for Medical and Health Care "
	7 Jan 2022	Webinar on "Outcome Based Education (OBE)"
	30 June 2021	Webinar on "Plastic Management & Recycling"
	27 June 2021	Webinar on "NEP-2020"
<b>Dr Manju Kashyap</b>	27 Jan 2022	Webinar on ""Exploring Happiness from the Universal Human Value Education Perspectives"
	7-11 Feb 2022	FDP on "Outcome Based Education"
	14 Feb 2022	Webinar on "Healing Through Breath and Meditation"
	16 Feb 2022	Webinar on "Neural Engineering for Medical and Health Care"
	21-27 Feb 2022	FDP on "Programme Skills using Python"
	16 Mar 2022	Webinar on "World Recycling Day"
	23-28 May 2022	FDP on "Role of Optimization in Computational Mathematics, Supply Chain Management & Engineering"
<b>Dr Monika Malik</b>	7 Jan 2022	Webinar on "Outcome Based Education (OBE)"
	27 Jan 2022	Webinar on "Exploring Happiness from the Universal Human Value Education Perspectives"
	14 Feb 2022	Webinar on "Healing Through Breath and Meditation"
	16 Feb 2022	Webinar on "Neural Engineering for Medical and Health Care"

## RESEARCH SECTION OF THE DEPARTMENT



FDP/ Workshop/ Refresher/ Seminars/ attended by faculty members during 2021-22

Name of faculty member	Duration	Details of FDP/ Workshop/ Refresher/ Seminar attended
Dr Ansar Anjum	7 - 11 Feb 2022	FDP on "Outcome Based Education"
	29 Sept - 5 Oct 2021	Refresher on "Four-Quadrant Model for Development of e-content, MOOCs and Teacher's Kit"
	21 Mar – 4 Apr 2022	National Refresher Course on "National Education Policy and the Teaching Pedagogy"
Dr Rajeev K. Mishra	17-21 Jan 2022	FDP on "Design Thinking"
	16 Mar 2022	Webinar on "World Recycling Day"
Dr Bipin K. Srivastava	16 Mar 2022	Webinar on "World Recycling day"
	16 Feb 2022	Webinar on "Neural Engineering for Medical and Health Care "
	7-11 Feb 2022	FDP on "Outcome Based Education"
	30 June 2021	Webinar on "Plastic Management & Recycling"
Dr Savita Verma	16 Mar 2022	Webinar on "World Recycling Day"
Dr Smriti Dwivedi	3-9 Dec 2021	Refresher program on "Use of Virtual Laboratories "



# CURRICULAR SECTION OF THE DEPARTMENT

## WORLD ENVIRONMENT DAY (under Environment Club, AS)



## AAVAHAN: An extension of Induction program





# CURRICULAR SECTION OF THE DEPARTMENT

## DONATION DRIVE (under Environment Club, AS)



## INDUCTION PROGRAM





# CURRICULAR SECTION OF THE DEPARTMENT

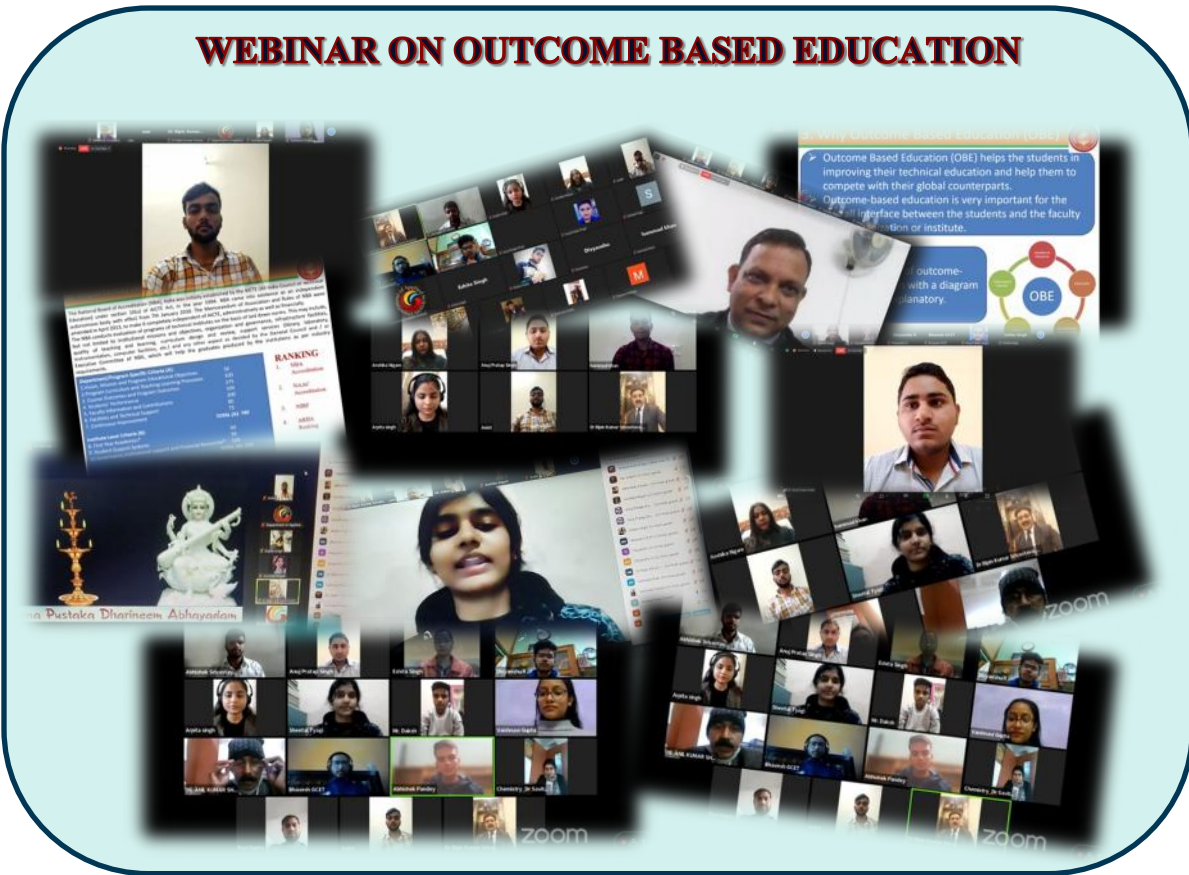
## INTERNATIONAL CONFERENCE ON INNOVATION AND APPLICATION IN SCIENCE AND TECHNOLOGY





# CURRICULAR SECTION OF THE DEPARTMENT

## WEBINAR ON OUTCOME BASED EDUCATION



## WEBINAR ON EXPLORING HAPPINESS FROM THE UNIVERSAL HUMAN VALUE EDUCATION PERSPECTIVES (under Environment Club, AS)





# CURRICULAR SECTION OF THE DEPARTMENT

## PLANTATION DRIVE (under Environment Club, AS)



# ACHIEVEMENTS OF THE DEPARTMENT

**Dr Rajesh Tripathi, Dr Bipin K. Srivastava, Dr Rajeev Mishra,  
Dr Padam Singh Tomar, Dr Vinay Gautam**  
*Materials Today: Proceedings, ISSN 2214-7853*

## Editorial Board members

**Dr Ansar Anjum**  
*American Journal of Water Science and Engineering*

**Dr Rajesh Tripathi**  
*Solar Energy*  
*Desalination*  
*Renewable and Sustainable Energy Reviews*  
*Thermal Engineering*

**Dr Ansar Anjum**  
*International Journal of Environmental Analytical Chemistry*

**Dr Rajendra Prasad**  
*Materials Today : Proceedings, ISSN 2214- 7853*

## Reviewers

**Dr Padam Singh Tomar**  
*Materials Today : Proceedings, ISSN 2214- 7853*  
*J. Phys.: Conf. Ser. (2223) 011001*  
*Enhanced Heat Transfer Research*  
*Frontiers in Heat and Mass Transfer*  
*Asian Research Journal of Mathematics*  
*Journal of engineering research and report*  
*SRMS Journal of Mathematical Sciences*

**Dr Bipin Kumar Srivastava**  
*Materials Today : Proceedings, ISSN 2214- 7853*  
*International Journal of Research in Chemistry and Environment(IJRCE)*

**Dr Dushyant Kumar**  
*Materials Today : Proceedings, ISSN 2214- 7853*  
*International Journal of Systems Assurance Engineering and Management (IJSA)*

## Patents published (08)

**Dr Rajesh Tripathi**  
**Dr Rajendra Prasad**  
**Dr Savita Verma**  
**Dr Bipin K. Srivastava**



