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NEWSLETTER

NOVEMBER 2023



**DEPARTMENT OF
CYBER SECURITY**

November 2023 Newsletter Highlights: Editor's Recap of Accomplishments, Interactions and Significant Milestones



The November 2023 newsletter encapsulates a vibrant and productive month, unveiling an array of achievements, engagements and significant milestones that have left an enduring impact on COER University. Across its pages, readers are immersed in a diverse range of initiatives, illustrating the University's dedication to innovation, collaboration and academic excellence.

Commencing with insights from the Pro-Chancellor, the newsletter underscores the significance of embracing cyber security excellence and the role of entrepreneurship and startups in the academic landscape. The Pro-Vice Chancellor's message on cultivating innovation and entrepreneurship extends heartfelt wishes to diligent students preparing for end-semester examinations.

Highlights encompass the outcomes of the 7th Academic Affairs Committee Meeting, with a focus on research, industrial visits and placement strategies. The triumphs of a recent Hackathon underscore the innovative and collaborative spirit thriving within the academic community.

Readers gain insights into the synergies between parents and educators during an online Parent-Teacher Meeting, alongside the successful completion of initiatives such as the Matlab Workshop and IoT Bootcamp.

The newsletter delves into assessments and strategic discussions, spotlighting proactive leadership and collaborative planning that have steered the trajectory of the academic community. A thorough review of technical training, faculty recognition and workshop engagement further emphasizes the commitment to academic excellence.

Celebratory moments include Diwali festivities, the successful Python Masterclass and collaborative online project presentations. The newsletter sheds light on University-wide coordination, community involvement and faculty's active participation in workshops, emphasizing the importance of scholarly contributions.

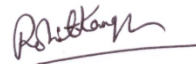
Reflections on Project-Based Learning, a comprehensive review meeting on University progress and a special session on health, wellness and yoga showcase the holistic development of the academic community. Achievements at the Women Scientist Conclave, success in Mid-Term

Examination - II and participation in a seminar on 'Research Ethics in the Age of AI' underscore dedication to academic and ethical standards.

The newsletter celebrates student innovation at the IIT Roorkee Exhibition, acknowledges pioneering research in smart security and fosters community spirit through faculty birthday celebrations. Rigorous reviews of academic processes through Internal Audit-II, exceptional student achievements and contributions to health diagnostics research underscore the commitment to maintaining high academic standards.

Significant accomplishments, including contributions to a Scopus indexed journal, completion of a 12-week NPTEL course and triumphs at Rialtes Technologies and Solution LLP, mark the culmination of academic success. Recognizing students' internships, Coursera certifications and successful placements at Career Mantra Pvt Ltd showcase the University's commitment to supporting students' professional journeys.

The newsletter concludes with heartfelt gratitude to all stakeholders—students, faculty, staff and parents - for their unwavering support, inspiring a continued pursuit of greatness in the upcoming months.



(Dr. Rohit Kanauzia)
**HOD, Department of Cyber Security,
College of Smart Computing, COER University**

Embracing Cyber Security Excellence: Pro-Chancellor's Message to Dedicated Readers



Dear Esteemed Readers,

It brings me great pleasure to address the dedicated readers of the Department of Cyber Security's monthly newsletter. In a world where the digital landscape evolves at an unprecedented pace, the importance of cyber security cannot be overstated. Our University has always been at the forefront of technological advancements and our Department of Cyber Security has played a pivotal role in this endeavor.

In today's interconnected world, the safeguarding of data, privacy and critical infrastructure is of paramount importance. The work of our Department of Cyber Security as showcased in this magazine, underscores our commitment to staying ahead in this critical field. The magazine you hold in your hands, or browse through digitally, is a testament to the dedication and expertise of our faculty, researchers and students. It is within these pages that you will find a treasure trove of knowledge, cutting-edge research and innovative strategies that underscore our University's commitment to staying ahead in the field of cyber security.

I encourage you to continue exploring new frontiers, pushing boundaries and sharing your knowledge with the global community. Together, we can contribute to a safer and more secure digital landscape for all. I extend my gratitude to the faculty, staff and students who make our Department of Cyber Security shining beacon of excellence. Your dedication to the pursuit of knowledge and the protection of our digital world is commendable.



(Shriyance Jain)

Pro-Chancellor, COER University

Cultivating Innovation and Entrepreneurship: A Message from the Pro-Vice Chancellor



Dear Esteemed Readers,

As the department enters the November edition of the monthly newsletter, I extend a warm welcome to all members of this dynamic and forward-thinking community. November brings forth a multitude of updates, achievement and insights that underscore our unwavering commitment to achieving excellence in cyber security.

In the swiftly evolving realm of digital security, the dedication and resilience of our faculty and students stand out prominently. This month's newsletter serves as a platform to showcase cutting-edge initiatives, collaborative

research endeavor and the milestones achieved by our community.

From pioneering research projects to advancements in cyber security education, each contribution within these pages reflects our department's steadfast dedication to staying at the forefront of technological innovations. The work undertaken not only molds our department's identity but also makes substantial contributions to the broader cyber security domain.

The interchange of ideas, the pursuit of knowledge and the shared objective of securing the digital landscape position us as leaders in the field. It is this collaborative ethos that propels us forward, ensuring our sustained success.

As we commemorate the achievements of November, let us also look forward with anticipation. I extend my sincere gratitude to everyone who contributes to the success of the Department of Cyber Security.



(Dr. B.M Singh)

Pro-Vice Chancellor, COER University

Best Wishes for the Upcoming End Semester Examinations



Dear Students,

As the end of the semester approaches, I want to take a moment to extend my heartfelt wishes to each one of you. The upcoming end semester examinations in December 2023 mark a significant milestone in your academic journey.

I understand the hard work, dedication and countless hours of preparation you have invested in your studies. Your commitment to excellence is commendable and I am confident that it will reflect in your performance during the upcoming exams.

Approach each paper with confidence, knowing that you have the knowledge and skills necessary to succeed. Remember, examinations are not just a test of memory but an opportunity to showcase your understanding and application of the subjects you've studied.

Believe in yourself, stay focused and maintain a positive mindset. Your efforts will undoubtedly pay off and you will emerge from this examination period with a sense of accomplishment.

If you encounter challenges or feel overwhelmed, don't hesitate to reach out for support. We are here to assist you in any way we can.

Wishing you the very best of luck in your end semester examinations. May you perform at your best and achieve the success you deserve.



(Dr. Himanshu Chauhan)
Controller of Examination

Keeping Up with the Times: Latest Trends and Developments in Emerging Technologies



In today's rapidly evolving world, staying abreast of technological advancements is crucial. These innovations revolutionize industries, reshape economies and redefine our daily lives. Understanding emerging technologies is vital for navigating this dynamic landscape successfully.

- **AI & ML:** AI and Machine Learning drive personalized experiences and power various sectors like healthcare, finance and cyber security. As they integrate deeper into society, ethical considerations remain pivotal.
- **IoT:** The Internet of Things interconnects devices, streamlining processes in smart homes, healthcare, agriculture and manufacturing. Security concerns surrounding data exchange pose challenges.
- **5G Technology:** Promising ultra-fast speeds and low latency, 5G fuels remote work capabilities, smart cities and AR/VR applications. Its continued expansion promises transformative impacts across industries.
- **Blockchain:** Beyond cryptocurrencies, Blockchain's secure ledger system finds applications in supply

chain management, voting and healthcare records, ensuring enhanced security and transparency.

- **Quantum Computing:** In its infancy, Quantum Computing's potential to solve complex problems faster could revolutionize cryptography, drug discovery and optimization.

The pace of technological change remains relentless. Being informed about these trends is critical for individuals and businesses to thrive in an increasingly tech-driven future. Embracing these innovations while maintaining adaptability, ethical practices and proactive measures is essential for harnessing their transformative power for societal betterment.

"Embracing emerging technologies isn't just about keeping up; it's about leading the way into a future where innovation and adaptability redefine our possibilities."



(Varun Mishra)
Asst. Professor, Dept. of Cyber Security

7th Academic Affairs Committee Meeting: Insights on Research, Industrial Visits and Placement Strategies

The 7th Academic Affairs Committee meeting convened on 1st November 2023, providing a platform for robust discussions on key agenda items, including research initiatives, industrial visits and placement strategies. The Head of the Cyber Security Department played an active and constructive role in these deliberations, contributing positively to the overall discourse.



The meeting delved into various aspects with research being a pivotal focus. Discussions revolved around ways to enhance and encourage research activities within the academic framework, ensuring a conducive environment for both faculty and students to engage in meaningful and impactful research endeavors.

Industrial visits, another significant agenda item, were explored in detail. The committee deliberated on ways to facilitate insightful industry exposure for students, fostering

practical understanding and alignment with real-world scenarios. Placement strategies were also brought to the forefront, with discussions centering on optimizing avenues for student placements.

The 7th Academic Affairs Committee meeting served as a platform for comprehensive discussions on vital academic matters.

Charting New Heights: Trailblazing to Victory in Hackathon

Mr. Jalaj Singh and Mr. Pratham Balodi, accomplished third-year students in the department, have earned a distinguished accolade by securing the top position in a prestigious 2-Day Hackathon organized by Amity University, Gurugram, held on 2nd and 3rd November 2023. Their achievement apart is the notable triumph over teams hailing from some of the country's foremost institutions, including IITs and NITs. The Hackathon witnessed active participation from an impressive cohort of 150 teams, representing a diverse array of regions and corners across nation.



The significance of Jalaj and Pratham's success extends beyond personal accomplishments; it serves as a source of immense pride for our department and establishes a new standard for excellence in the field. Their ability to outshine some of the nation's most brilliant technical minds stands as a testament to their exceptional skills, unwavering dedication and the outstanding education imparted by our department. For their outstanding achievement, the department extends heartfelt congratulations to Jalaj Singh and Pratham Balodi. Their victory not only serves as an inspiration to their peers but also underscores the robust academic foundation and nurturing environment fostered within our department.

Fostering Innovation and Collaboration: The Department's Hackathon

The Computing Block hosted an extensive Two Day's Hackathon from 2nd and 3rd November 2023, organized by the department. The event saw active participation of students eager to showcase their skills and innovative ideas. The hackathon aimed to provide a collaborative platform for participants to tackle real-world problems using cutting-edge technologies, showcasing creativity, technical expertise and teamwork with the potential for positive societal impact. With themes like Artificial Intelligence, Internet of Things, Blockchain, Cyber security, Big Data and Cloud Computing, teams, consisting of 3-6 members from 1st to 4th year, worked tirelessly under the guidance of mentors and experts. Commencing on November 2, 2023, the hackathon concluded on November 3, 2023, featuring final presentations and prize distribution.



The judging panel, consisting of experts from various departments, evaluated projects based on criteria such as creativity, feasibility and potential impact. The winners were as follows:

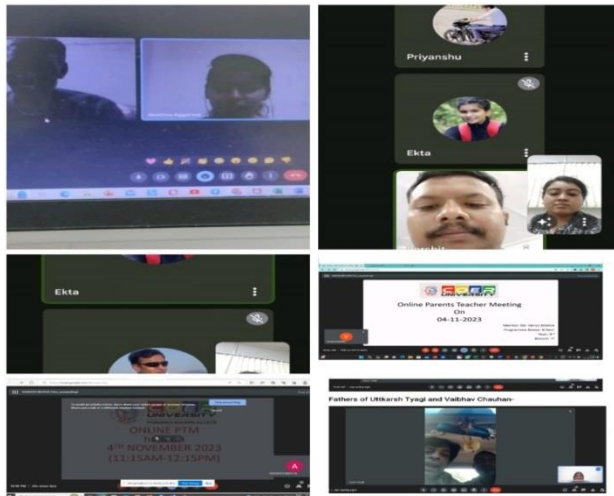
- 1st Place (Team Galaxy): Aafia Hussain (Team Leader), Suchir Kaushik, Prianyank Tyagi, Rohit Aggarwal, Madhuri Sharma, Vakul Kumar.
- 2nd Place (Team The Elites): Aanchal Garg (Team Leader), Anushka Rohal, Ishans Kumar, Deepika Tanwar, Krishna, Khadija.
- 3rd Place (Team Chatbot Connectors): Avinash Kumar (Team Leader), Yash Singhal, Dinesh Aswin Mylavarapu, Shivang Gulati, Vriti Khandelwal.

The valedictory ceremony was presided over by Dr. B.M Singh (Pro-Vice Chancellor, COER University) along with Dr. Rohit Kanauzia, Head of the Department. It was a moment of congratulations for all the winners and participants.

Online Parent-Teacher Meeting: Briefing Parents on Ward's Academic Progress and Development

The department organized a significant Online Parent-Teacher Meeting on November 4, 2023, to provide a comprehensive update to parents regarding the academic progress and overall development of their wards. The virtual meeting served as a valuable platform for open communication, allowing parents to gain insights into their child's achievements, challenges and engagement within the academic environment.

During the meeting, educators and parents actively participated in discussions covering various aspects of the student's performance, including academic achievements, participation in extracurricular activities and overall behavior. This exchange of information aimed to foster a collaborative partnership between parents and teachers, ensuring a holistic understanding of the student's educational journey.



The event also facilitated discussions on any specific concerns or queries parents may have had, allowing for personalized attention and addressing individual needs. The Online Parent-Teacher Meeting emphasized the importance of parental involvement in a student's academic life and sought to establish a supportive network between the home and school environment.

This initiative reflects the department's commitment to transparency, communication and the overall well-being of the students.

Successful Completion of Matlab Workshop

Ms. Soumya Upadhyay, Assistant Professor in the department, has successfully completed an extensive Two-Day Workshop on Matlab, conducted on 4th and 5th November 2023. This workshop aimed to augment her proficiency in Matlab, a programming language widely utilized in engineering and scientific applications.

During the workshop, Ms. Upadhyay actively participated in a well-structured curriculum covering a range of Matlab concepts, spanning from fundamental syntax to advanced features and applications. The sessions not only stressed theoretical understanding but also facilitated hands-on experience through practical exercises and real-world case studies.



Her active participation in discussions, along with a demonstrated grasp of Matlab programming principles, not only showcases her personal commitment but also indicates potential contributions to the academic enrichment of the department.

The impact of Ms. Upadhyay's enhanced knowledge is anticipated to resonate in her teaching methodologies, further contributing to the ongoing refinement of the department's curriculum. The insights gained align with current industry trends, positioning Ms. Upadhyay as a valuable asset in the department's initiatives to equip students with pertinent and contemporary programming skills.

Completion of IoT Bootcamp: Enhance Expertise in Dynamic Field

Assistant Professor Mr. Vipin Kumar in our department has successfully completed a demanding One Week Bootcamp on the Internet of Things (IoT), conducted from 6th to 11th November 2023. This intensive program aimed to augment Mr. Kumar's proficiency in the dynamic field of IoT, delving into the interconnected realm of devices and data. Throughout the bootcamp, Mr. Kumar actively immersed himself in a comprehensive curriculum encompassing a wide range of IoT concepts, spanning from foundational principles to advanced applications. The sessions were meticulously designed to balance theoretical understanding with practical implementation, providing participants with opportunities to engage in hands-on exercises and analyze real-world case studies.



Mr. Kumar's successful completion of this bootcamp underscores his dedication to remain at the forefront of technological advancements. His active involvement in discussions, coupled with a demonstrated grasp of IoT principles, not only mirrors his personal commitment but also signals potential contributions to the department's academic enhancement.

The impact of Mr. Kumar's enriched knowledge in IoT is anticipated to reverberate in his teaching methodologies, further contributing to the continuous refinement of the department's curriculum.

Proactive Leadership and Collaborative Planning: Assessment and Strategic Discussions

Dr. B.M Singh, the Pro-Vice Chancellor, demonstrated proactive leadership by conducting a series of meetings on November 6, 7, 17, 18 and 20, 2023, to assess progress and plan for the upcoming academic session. These sessions convened all the Heads of the College of Smart Computing, fostering a comprehensive platform for collaborative discussions.

Participating in these discussions were all the Heads of the College of Smart Computing, including Dr. Rohit Kanauzia, the Head of the Cyber Security Department. Dr. Kanauzia actively engaged in positive discussions aimed at enhancing the academic landscape within the College of Smart Computing. The primary focus of these meetings was to evaluate ongoing progress, identify areas for improvement and collectively plan for the upcoming academic session.



Dr. Kanauzia's involvement in these sessions underscored his commitment to contributing to the department's overall development and academic excellence. The positive discourse held during these meetings is indicative of a collaborative approach among the academic leadership, fostering an environment of shared vision and collective decision-making. The topics covered likely spanned a range of aspects, including curriculum development, faculty training, student engagement strategies and the integration of emerging technologies into academic programs. Dr. Kanauzia's participation suggests a keen interest in addressing the evolving needs of the Cyber Security Department and aligning its objectives with the broader goals of the College of Smart Computing.

In his role as the Head of the Cyber Security Department, Dr. Rohit Kanauzia's positive engagement in these strategic meetings reflects his dedication in shaping the future direction of the department. The collaborative efforts among all the Heads of the College of Smart Computing under the guidance of the Pro-Vice Chancellor signal a commitment to continuous improvement and excellence in academic endeavors.

These meetings also featured active participation from Dr. Himanshu Chauhan (Controller of Examination), Dr. Mridula, (Dean, IQAC) and other Deans and Heads from COER University further enriching the depth and breadth of the discussions.

Comprehensive Review Meetings: Assessing Department Progress and Collaboration

The department conducted crucial review meetings on 6th and 10th November 2023, under the leadership of the Head of the Department. These meetings served as a comprehensive platform for evaluating the progress and performance of the department, bringing together all faculty members in active participation.

Chaired by the Head of the Department, the meetings aimed to assess various aspects, including academic achievements, research endeavors, faculty contributions and overall departmental development. The sessions likely provided an opportunity to delve into the challenges faced, achievements celebrated and strategies for continuous improvement.



The active participation of all department faculty members in these meetings showcased a collective commitment to the department's goals and objectives. Faculty members likely contributed insights into their respective areas of expertise, sharing experiences and best practices. These collaborative discussions fostered an environment of shared responsibility and a collective approach to addressing challenges and seizing opportunities.

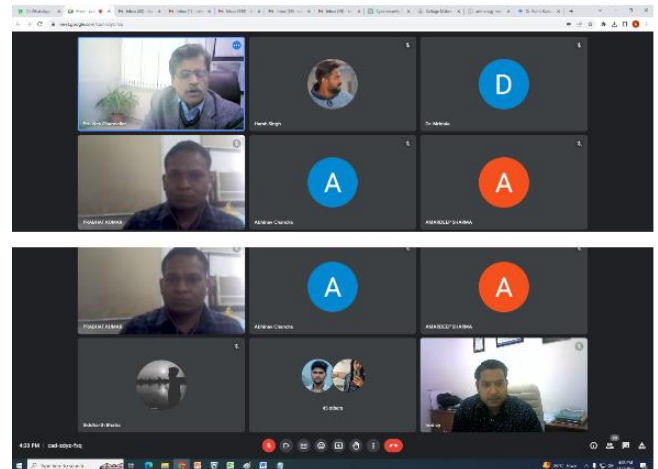
Topics discussed in these meetings might have encompassed curriculum updates, ongoing research projects, student engagement initiatives and any upcoming events or activities planned by the department. The focus was likely on aligning departmental efforts with the broader institutional goals, ensuring a cohesive and forward-looking approach.

The review meetings under the chairmanship of the Head of the Department are indicative of a proactive stance towards continuous improvement and excellence. Such gatherings not only facilitate the exchange of ideas and experiences but also provide a platform for collective decision-making, strengthening the overall academic fabric of the department.

The department's review meetings held on November 6 and 10, 2023, stand as a testament to the commitment of the faculty and the leadership to the ongoing progress and development of the department.

Pro-Vice Chancellor (Academics) Guides Final Year Students in Academic Review Meeting with Department Heads.

In a proactive and student-centric move, the Pro-Vice Chancellor (Academics), Dr. S.P Pandey, orchestrated a significant meeting on November 7, 2023, engaging with all final year students to meticulously review their academic progress.



This session served as a valuable platform for Dr. Pandey to offer personalized guidance and insights, ensuring each student is well-equipped to navigate the final phase of their academic journey successfully. The inclusive nature of the meeting was highlighted by the presence of Head of the Cyber Security Department alongwith other Heads of Departments. This collaborative effort reflects the University's commitment to fostering a supportive and mentorship-oriented academic environment. The interaction not only underscores the institution's dedication to the academic growth of its students but also showcases the leadership's active involvement in shaping the educational experience for each individual.

Such initiatives contribute significantly to creating a holistic and enriching academic community within the University.

Comprehensive Review on Technical Training by Hon'ble Chancellor's

On 10th November 2023, a significant review session took place as the Hon'ble Chancellor, COER University, Er. J.C Jain ji, led a comprehensive assessment of the progress in technical training for students. The review involved key figures, including Pro-Vice Chancellor Dr. B.M Singh and Ms.

Divya Mishra, the Associate Dean responsible for Training and Placement (T&P) initiatives. The collaborative effort sought to evaluate and enhance the technical training landscape within the University.



A notable aspect of this review was the active participation of Heads from various departments, ensuring a holistic understanding of the University's technical training endeavors. Dr. Rohit Kanauzia, the Head of the Cyber Security Department, played a pivotal role in the meeting by presenting a detailed overview of the department's progress in technical training.

The session provided a platform for a thorough discussion of achievements, challenges and future directions in technical training. Dr. Rohit Kanauzia's briefing not only highlighted the accomplishments of the Cyber Security Department but also shed light on the strategies employed to address challenges and improve the overall quality of technical training.

The presence of the Hon'ble Chancellor underscored the significance attached to technical training, emphasizing its role in shaping the academic and professional journey of students. The Pro-Vice Chancellor and Associate Dean, T&P contributed valuable insights and guidance to further enhance the effectiveness of the technical training programs.

The collaborative effort and engagement of department heads in this review reflected a commitment to continuous improvement and aligning technical training with industry standards. The meeting not only served as a platform for reporting progress but also as an opportunity to strategize and plan for the future, ensuring that the institution remains at the forefront of providing high-quality technical education. In essence, the 10th November 2023 review session on technical training marked a significant milestone in the University's commitment to excellence.

Championing Teaching Excellence: Recognizing and Honoring Faculty members

In a laudable effort to recognize and celebrate teaching excellence, the department recently organized a Teaching Appreciation Ceremony on November 10, 2023, with the esteemed presence of Dr. Mridula (Dean, Internal Quality Assurance Cell).

The ceremony was a poignant acknowledgment of the dedication and proficiency exhibited by faculty members in shaping the academic journey of students. Leveraging valuable insights from student feedback, meticulously conducted by IQAC, faculties who garnered feedback scores surpassing 80% were singled out for their exemplary teaching practices. The ceremony served as a platform to express gratitude



The distinguished faculties who received accolades during this ceremony include Dr. Rohit Kanauzia, Dr. Maneesh Kumar, Ms. Mamta Mamtorila, Mr. Sharad Kumar Singh, Mr. Varun Mishra, Mr. Vipin Kumar, Ms. Renu Bahuguna, Ms. Kanika Agrawal, Ms. Soumya Upadhay, Mr. Vikrant Rana, Mr. Vinay Saroya, Mr. Kamal Kumar Gola, Ms. Ruchi Kumar, Ms. Akansha Goel and Ms. Camel Chakarborty.

Their commitment to fostering a conducive learning environment and their positive impact on students were celebrated, reinforcing the department's unwavering dedication to academic excellence and student-centric education.

Advancing Academic Excellence: Proactive Engagement in the 'Intellectual Property Rights' Workshop

In a continuous pursuit of academic excellence and professional development, the Head of the Department, recently enriched his knowledge base by actively participating in the "Intellectual Property Rights" workshop. The workshop was organized by MIET Haldwani in collaboration with Uttarakhand Open University, Haldwani, under the aegis of the Uttarakhand State Council for Science and Technology, Dehradun, on the 10th of November 2023. The workshop, centered around the critical theme of Intellectual Property Rights (IPR), was a platform for comprehensive exploration and understanding of the legal and ethical dimensions surrounding intellectual property. Dr. Kanauzia's keen interest and active involvement in this workshop not only underscore his commitment to staying abreast of contemporary issues but also reflect his dedication to equipping our academic community with valuable insights into this evolving field.



The "Intellectual Property Rights" workshop delved into various aspects of IPR, including patents, copyrights, trademarks and trade secrets. His participation in this event is particularly noteworthy as it aligns with our department's vision of fostering a holistic understanding of the academic landscape, encompassing both theoretical and practical facets.

The collaboration between MIET Haldwani, Uttarakhand Open University and the Uttarakhand State Council for Science and Technology has provided a commendable platform for intellectual exchange and Dr. Kanauzia's involvement reinforces our department's commitment to leveraging such opportunities for the growth and enrichment of our faculty.

As the Head of the Department, Dr. Rohit Kanauzia's engagement in workshops of this nature serves as an exemplary model for both faculty and students. By actively participating in discussions surrounding intellectual property,

he not only enhances his own expertise but also becomes a valuable resource for our academic community, facilitating a deeper understanding of the legal frameworks governing intellectual property rights.

In acknowledging and applauding Dr. Rohit Kanauzia's proactive involvement in the "Intellectual Property Rights" workshop, we recognize the invaluable contribution he makes to our department's academic vitality.

A Brightly Diwali Celebration spearheaded by the University's Leadership

The Diwali celebration held at COER University on the 11th of November 2023, orchestrated under the guidance of Shri. J.C. Jain (Chancellor), Mrs. Sunita Jain (Vice-Chairperson), Shri. Shriyance Jain (Pro-Chancellor), Mrs. Charu Jain (Executive Director) and Dr. B.M. Singh (Pro-Vice Chancellor), the campus was aglow with festive spirit and camaraderie.



On the joyous occasion of Diwali, the spirit of unity and festivity resonated throughout as all department faculties enthusiastically participated in the grand celebration held on November 11, 2023. The vibrant event brought together diverse talents and cultural expressions, creating a lively atmosphere that reflected the rich traditions of Diwali.

The celebration marked by vibrant performances and traditional rituals, brought together faculty and staff in a celebration of light and joy. The participation of all department faculties added a special touch to the occasion, showcasing the unity and diversity within the academic community.

The event not only honored the significance of Diwali but also served as a platform for fostering a sense of togetherness and harmony among the COER University family. The leadership's active involvement and the enthusiastic participation of all departments created an atmosphere of warmth and inclusivity.

Successful Completion of Python Masterclass: Enriching Departmental Expertise and Academic Development

Mr. Vipin Kumar, Assistant Professor in our department, has successfully completed a comprehensive 21 Days Masterclass on Python Programming, spanning from October 25th to November 14th, 2023. This intensive program was designed to deepen his proficiency in Python, a pivotal programming language widely recognized for its versatility and applications across various domains.

Throughout the masterclass, Mr. Kumar actively engaged in a structured curriculum that covered a spectrum of Python concepts, ranging from fundamental syntax to advanced features and frameworks. The course not only emphasized theoretical understanding but also encouraged practical application through hands-on exercises and real-world scenarios.



Mr. Kumar's successful completion of this masterclass underscores his commitment to continuous learning and professional development. His active participation in discussions, coupled with a demonstrated understanding of Python programming principles, reflects not only on his personal dedication but also holds promise for the department's academic enrichment.

The impact of Mr. Kumar's enhanced knowledge is expected to resonate in his teaching methodologies and contribute to the ongoing refinement of the department's curriculum. Looking ahead, Mr. Kumar is encouraged to share his experiences and newfound knowledge with the department, fostering a culture of collaborative learning. Additionally, the

department may explore avenues to integrate the acquired skills into courses or workshops, ensuring that the benefits extend to the broader academic community.

Collaborative Online Project Presentations to USERC

On the 17th and 18th November 2023, Dr. Rohit Kanauzia, and a group of faculties from the department including Ms. Soumya Upadhyay, Ms. Mamta Mamtolia, Mr. Varun Mishra, Ms. Renu Bahuguna and Mr. Sharad Kumar Singh, collectively delivered a series of online presentations for their submitted project to the Uttarakhand Science Education and Research Centre (USERC) in Dehradun. This collaborative effort showcased the department's commitment to research and innovation.

The presentations likely encompassed a diverse range of topics, reflecting the expertise and interests of the presenters. Dr. Rohit Kanauzia has shared insights into the technological and security aspects of the project. Ms. Soumya Upadhyay, Ms. Mamta Mamtolia, Mr. Varun Mishra, Ms. Renu Bahuguna and Mr. Sharad Kumar Singh, each contributing from their respective fields, would have added depth and diversity to the overall presentation.

The fact that these presentations were delivered online signifies the adaptability and technological proficiency of the department. The virtual format allowed for seamless communication and engagement with USERC, demonstrating the department's commitment to leveraging technology for collaborative initiatives.

The submitted project is currently in the final result processing stage, suggesting that the outcomes and impact of the presentations are under assessment. The anticipation surrounding the final result adds an element of excitement and expectation, highlighting the significance of the project in contributing to the research goals of both the department and USERC.

The participation of multiple faculty members in this collaborative project and presentation emphasizes the department's holistic approach to research and its dedication to fostering a culture of knowledge exchange and innovation.

University-wide Coordination: Meeting of Deans and Heads

The Registrar, Dr. Maneesh Kumar Mathur, demonstrated proactive leadership by organizing a crucial meeting on November 18, 2023, bringing together all the Deans and Heads of various departments within the University. Dr. Rohit Kanauzia, the Head of the Cyber Department, actively participated in this significant gathering. The meeting, under the guidance of Dr. Mathur, likely served as a forum for

comprehensive discussions on various aspects of University affairs. The participation of Deans and Heads from different departments ensured a diverse representation, facilitating the exchange of ideas and insights from various academic disciplines.



Dr. Rohit Kanauzia's active involvement in this meeting underscored the Cyber Department's commitment to contributing constructively to the University's overarching goals. His participation likely included discussions on departmental achievements, ongoing projects and future plans, aligning them with the broader University vision. Topics covered in the meeting might have included academic initiatives, research developments, administrative matters and any upcoming events or activities planned by different departments. The collaborative nature of such gatherings fosters a sense of shared responsibility and collective decision-making, contributing to the overall strategic direction of the University. The Registrar's role in orchestrating this meeting highlights the importance placed on effective communication and coordination within the University's administrative structure. Such meetings play a crucial role in ensuring that all departments are aligned with the University's mission and goals, fostering a cohesive and integrated approach to academic and administrative functions.

Government Inter College Roorkee Project Exhibition

In a testament to the department's commitment to fostering academic engagement and collaboration, Mr. Vinay Saroya, Assistant Professor, played a pivotal role as a judge in the project exhibition hosted at Government Inter College Roorkee from November 18th to 20th, 2023. Serving as a

judge reflects not only Mr. Saroya's expertise in the subject matter but also the department's active involvement in promoting educational initiatives beyond its own boundaries.



These exhibitions are integral platforms for students to showcase their innovative projects and apply theoretical knowledge to practical scenarios. By participating as a judge, Mr. Vinay Saroya contributes significantly to the academic development of participating students, providing constructive feedback and encouraging a culture of learning and innovation. Such engagements not only enrich the educational experience for students but also strengthen the ties between educational institutions, fostering a collaborative and supportive academic community.

Exploring the Craft: Active Involvement in the "Art of Research Paper Writing" Workshop

In a dynamic intersection of academia and skill refinement, Mr. Vikrant Rana, an esteemed Assistant Professor in our department, recently demonstrated his commitment to scholarly excellence by actively participating in the "Art of Research Paper Writing" workshop held from 18th to 20th November 2023.

This engaging workshop was designed to delve into the intricacies of effective research paper composition, catering to both novice and seasoned researchers alike. Mr. Rana's enthusiastic participation reflects his dedication to advancing

not only his own skills but also contributing to the overall academic growth within our department.

The "Art of Research Paper Writing" workshop provided a comprehensive platform for participants to refine their research writing skills, addressing key aspects such as literature review, methodology, data analysis and effective communication of research findings. By immersing himself in this enriching experience, Mr. Rana has not only honed his own abilities but has also positioned himself as a valuable resource for guiding and mentoring students and colleagues in the fine art of scholarly writing.



Mr. Rana's active involvement in such workshops showcases his commitment to staying abreast of the latest developments in academia and his dedication to imparting valuable insights to his students. The knowledge and skills acquired during the workshop undoubtedly contribute to the overall academic vibrancy of our department.

The "Art of Research Paper Writing" workshop serves as a testament to the department's emphasis on continuous learning and professional development. Mr. Rana's initiative in participating in this event aligns with our collective pursuit of academic excellence and exemplifies the ethos of a faculty dedicated to both personal and professional growth. In congratulating Mr. Vikrant Rana on his proactive engagement in the "Art of Research Paper Writing" workshop, we celebrate not only his individual commitment to excellence but also the spirit of intellectual curiosity and advancement that defines our academic community.

Culmination of Project-Based Learning - Final Review Sessions Showcase Student Innovation and Learning

In the latter part of November 2023, the department undertook a crucial phase in its academic calendar by conducting the final review of Project-Based Learning (PBL). This multifaceted evaluation process spanned four significant dates—20th, 28th, 29th and 30th November. During this period, students showcased their diligently crafted projects

to mentors, marking the culmination of an intensive learning journey.

The PBL final review sessions served as a platform for students to demonstrate the depth of their understanding, innovative thinking and practical application of knowledge acquired throughout the project duration. The presentation of projects allowed students to articulate their methodologies, challenges faced and the outcomes achieved, providing mentors with a comprehensive insight into the students' learning experiences.



The involvement of mentors in the final evaluation process added a layer of expertise and guidance, ensuring that the projects not only met academic standards but also reflected real-world applicability. The collaborative exchange between students and mentors fostered an environment of constructive feedback, enriching the learning experience and encouraging continuous improvement.

This comprehensive approach ensured that every student received the attention and scrutiny necessary for a fair and accurate assessment.

The significance of the final review sessions extended beyond the evaluation of individual projects. They served as a collective celebration of students' intellectual achievements, emphasizing the department's commitment to experiential and project-based learning methodologies.

As students presented their projects, the department witnessed a diverse array of innovative solutions, creative implementations and interdisciplinary collaborations. The final review not only gauged the success of the projects but also provided valuable insights into the effectiveness of the department's pedagogical approach.

In essence, the PBL final review sessions were a culmination of months of dedicated effort, reflective learning and collaborative mentorship. They underscored the department's commitment to fostering a dynamic and practical learning environment, where students are not only equipped with theoretical knowledge but are also adept at applying their skills in real-world scenarios.

Comprehensive Review Meeting on University Progress in NAAC and NIRF

On 21st November 2023, a comprehensive review of the progress made in the realms of the National Assessment and Accreditation Council (NAAC) and the National Institutional Ranking Framework (NIRF) took place at the University. Spearheaded by Dr. S.P. Pandey (Pro-Vice Chancellor-Academics) and Dr. Mridula (Dean, IQAC), the review sought to evaluate the advancements and developments within the University.

Dr. Rohit Kanauzia, the Head of the Department, played a pivotal role in presenting the strides made by the department, offering a detailed account of achievements, initiatives and challenges faced. Joining him in this discussion was Mr. Sharad Singh, an Assistant Professor in the department, who actively contributed insights into the progress made thus far.



The meeting served as a platform for a robust exchange of ideas and information, as the University officials, led by Dr. S.P. Pandey and Dr. Mridula, engaged in a dialogue with Dr. Rohit Kanauzia and Mr. Sharad Singh. This interactive session allowed for a comprehensive understanding of the initiatives undertaken, the impact of these initiatives on the department and the future roadmap envisioned.

Crucially, the review did not occur in isolation; rather, it witnessed the participation of Heads from various departments across the University. This collaborative approach ensured a holistic assessment of the University's progress, as insights were shared and experiences were discussed. The collective presence of department heads added depth to the review, providing a panoramic view of the institution's standing in the context of NAAC and NIRF parameters.

Dr. S.P. Pandey and Dr. Mridula offered constructive feedback based on the presented information, highlighting areas of commendation and suggesting refinements where necessary. This feedback mechanism aimed to facilitate

continuous improvement and align the University's endeavors with the benchmarks set by NAAC and NIRF.

In essence, the review session on November 21, 2023, emerged as a comprehensive and collaborative evaluation of the University's progress in the domains of NAAC and NIRF. It showcased the commitment of the University leadership, department heads and faculty members to quality assurance, academic excellence and continuous enhancement of institutional standards.

Special Session for Health, Wellness and Yoga

In a proactive and forward-thinking initiative, the department took a significant step toward enhancing the holistic well-being of its students. This endeavor materialized through the organization of special classes on Health, Wellness and Yoga, which were conducted on the 20th and 21st of November 2023. These sessions were meticulously designed to cater specifically to the needs of first-year students, recognizing the critical juncture they find themselves in as they embark on their academic journey.



At the forefront of this initiative was Dr. Monika, an esteemed Assistant Professor in the Department of Pharmacy, whose leadership and expertise seamlessly blended pharmaceutical sciences with holistic health principles. Dr. Monika's passion for both aspects undoubtedly added a layer of authenticity and depth to the sessions, creating an environment conducive to learning and personal growth.

The significance of these classes cannot be emphasized enough, considering the pivotal role they play in shaping the overall well-being of students. Beyond the traditional academic curriculum, these sessions provided invaluable insights into maintaining not only physical but also mental well-being. Furthermore, the incorporation of yoga principles added a unique dimension, introducing students to a

discipline renowned for its diverse benefits, spanning physical fitness, mental clarity and stress management.

By integrating these classes into the academic curriculum, the Department of Pharmacy exemplifies a profound commitment to the comprehensive development of its students. It goes beyond the conventional role of an educational institution by acknowledging the importance of holistic growth. This initiative underscores the department's dedication to fostering not just academic excellence but also the health and wellness of its student body.

In the larger context, such proactive endeavors play a pivotal role in equipping students with the necessary tools to navigate the challenges inherent in academia.

Nurturing Academic Excellence: A Snapshot of Dedication and Engagement during MTE-II

Conducted with precision and organization, the Mid-Term Examination - II unfolded in our department from 22nd to 25th November 2023, exemplifying a profound commitment to academic rigor and assessment. The event saw active and enthusiastic participation from our devoted students.

Serving as a pivotal evaluation point, the Mid-Term Examination - II allowed students to demonstrate their grasp of course material and showcase their academic progress. Spanning four days, the examination provided a thorough assessment across a spectrum of subjects and topics.



The students' active engagement was a testament to their dedication to academic excellence and a genuine eagerness to master the course content. Throughout the examination period, students diligently attended, responded to questions and demonstrated their knowledge.

As a precursor to final examinations, the mid-term assessments enable students to discern their strengths and weaknesses. This insight aids in formulating effective study plans and strategies for the upcoming finals, contributing to overall academic excellence.

The structured examination schedule fosters a sense of discipline and time management among students.

Providing a holistic evaluation of students' knowledge, the Mid-Term Examination - II incorporates a diverse range of topics covered during the semester.

This comprehensive assessment ensures a well-rounded understanding of the subject matter, laying a strong foundation for academic success.

Celebrating Excellence: Achievements at Women Scientist Conclave

Ms. Anshoo Bhatia, Assistant Professor in the department, received the prestigious Young Women Scientist Achievement Award at the Women's Conclave hosted by the Uttarakhand Science Education & Research Centre (USERC) under the Government of Uttarakhand.

Ms. Bhatia's remarkable accomplishment not only underscores her unwavering dedication and expertise in the field but also stands as a shining example for aspiring women scientists. Her success is a testament to the strides being made by women in the scientific community, reflecting the spirit of empowerment and celebration.



Beyond being an individual accolade, Ms. Bhatia's recognition signifies a broader commitment in acknowledging and promoting the invaluable contributions of women in the field of science. The Women's Conclave, orchestrated by USERC, transcended the acknowledgment of individual achievements by recognizing the accomplishments

of 13 young women scientists from diverse fields at the state level. This collective celebration not only highlights the diversity of talent but also underscores the importance of fostering an inclusive and supportive environment for women in scientific pursuits.

The active participation of esteemed faculty members, including Dr. Mridula (Dean, IQAC), Dr. Rohit Kanauzia (Head of Cyber Security Department), Dr. Gesu Thakur (Head of Department of Computer Application), Ms. Vishaka (Assistant Professor in the Department of Cyber Security) and Ms. Anita Singh (Assistant Professor in the Department of Computer Science and Engineering) further emphasizes the institutional dedication to cultivating a culture of recognition and encouragement.

Ms. Anshoo Bhatia's achievement is more than a personal triumph; it symbolizes collective progress in empowering and celebrating women in the scientific community. It reinforces the idea that recognizing and supporting the accomplishments of women in science is pivotal for creating a more inclusive and progressive scientific landscape.

Dr. Anita Rawat, the Director of USERC, set the tone for the program with a warm welcome, shedding light on the profound significance of the Women Scientist Conclave. Dr. J.M.S. Rana, a distinguished guest and former Chairman of the Uttarakhand Public Service Commission, emphasized the amalgamation of modern science and technology with traditional Indian science to effectively address contemporary issues. Dr. S.S. Negi, the Vice-Chairman of the Uttarakhand Migration Commission, underscored the indispensable roles played by women in both social and economic sectors, acknowledging their vital contribution to the state's ongoing development and the conservation of natural resources.

Seminar on 'Research Ethics in the Age of AI'

Dr. Rohit Kanauzia, Head of the Department, played a pivotal and engaging role in the recent seminar on "Research Ethics in the Age of AI," which took place on 23rd November 2023. His dynamic and proactive involvement significantly enhanced the overall value of the event, as he brought forth invaluable insights and perspectives on the ethical considerations inherent in contemporary research within the realm of artificial intelligence. Dr. Kanauzia's profound expertise in the field, coupled with his unwavering commitment to upholding ethical standards, was consistently evident throughout the seminar. His active participation extended beyond mere attendance, as he actively engaged in thoughtful discussions, sharing a wealth of knowledge with fellow participants.

The seminar not only underscored the department's dedication to remaining at the forefront of emerging topics but also spotlighted Dr. Kanauzia's exemplary leadership qualities. His commitment to fostering ethical research practices within our academic community was apparent, setting a high standard for the entire department. The faculty and participants alike benefited from his contributions, which not only enriched the intellectual discourse of the seminar but also reinforced the ethical consciousness within our academic environment.



The department expresses sincere appreciation for Dr. Kanauzia's indispensable involvement in these crucial discussions, recognizing the profound impact on the intellectual growth and ethical development of our academic community.

Innovation Unleashed: Students Shine at IIT Roorkee Exhibition

On 24th November 2023, a cohort of bright minds from the department showcased their inventive prowess at an exhibition organized by Indian Institutes of Technology, Roorkee. The event, curated to foster creativity and problem-solving skills, provided an invaluable platform for students to present their groundbreaking ideas to the public. Among the array of projects exhibited, three distinguished themselves for their ingenuity and impact:

- *Home Automation System by Nikita and Chirag:*

Hailing from 2nd year, Ms. Nikita and Mr. Chirag developed a Home Automation System. This project not only controlled various home appliances using voice commands or a mobile app but also integrated features such as a security alarm, fire detection and an energy-saving mode. The duo demonstrated how their system could enhance home comfort, convenience and safety.

- *Flood Monitoring System by Mr. Suchir Kaushik, Mr. Priyank Tyagi and Ms. Disha Saini:*

Emerging from 2nd year, the project aimed at monitoring water levels and rainfall in a given area. Utilizing sensors, Arduino boards and GSM modules, the system collected and transmitted data to a web server, displaying it on a dashboard. The team showcased how their innovation could alert authorities and residents about potential floods, contributing to prevention and mitigation efforts.

- *Intel-i-Green by Mr. Jalaj and Mr. Pratham:*

Involving students from 3rd Year, Intel-i-Green focused on monitoring and optimizing plant growth indoors. Leveraging artificial intelligence and computer vision, the system used cameras, sensors and actuators to analyze plant images and data, adjusting parameters like light, temperature, humidity and water accordingly. The team demonstrated how their system could enhance plant quality and yield while minimizing human intervention and resource usage.



The exhibition garnered attention from faculty members, students and visitors, who appreciated the participants' efforts and achievements.

It also served as a platform for students to engage in mutual learning, exchanging valuable feedback and suggestions for improvement.

Pioneering Smart Security Research in Wireless Networks at International Conference

The successful presentation of Mr. Vipin Kumar's research paper titled "Scrutinizing the Function of Smart Security in the Context of Wireless Network" at the International

Conference on Recent Trends in Commerce, Management, Science and Technology is a significant achievement that highlights the academic prowess and contributions of the Assistant Professor within the department.

His research endeavors are vital in advancing knowledge in the field, especially considering the rapid evolution of technology and its implications on security in wireless networks. The conference, scheduled from 25th to 26th November 2023, serves as a platform for scholars and professionals to exchange insights and engage in discussions regarding recent trends.



Mr. Kumar's participation not only showcases his commitment to staying at the forefront of his field but also contributes to the academic discourse surrounding smart security. The dissemination of his research findings at such a prestigious international event not only enhances the reputation of the department but also underscores the relevance and importance of his work in the broader academic and technological community.

Successful Academic Review Visit

On 29th November 2023, a significant visit took place at our department, marked by the presence of the Pro-Vice Chancellor (Academics) and Dean, IQAC. Their purposeful visit was centered on a comprehensive review of the department's academic records. Delving into the intricacies of our educational endeavors, the Pro-Vice Chancellor and Dean, IQAC meticulously assessed various aspects of our academic performance. After a thorough examination, we are delighted to report that the review yielded a highly satisfactory outcome. This positive affirmation speaks volumes about the dedication, commitment and excellence maintained by the department in fostering a conducive

learning environment. It is a testament to the collective efforts of our faculty, staff and students who continually strive for academic brilliance.



Such affirmations reinforce our commitment to providing a top-notch educational experience and motivate us to uphold and surpass these standards in the future.

The department extends our gratitude to the Pro-Vice Chancellor and Dean, IQAC for their insightful visit and constructive feedback, inspiring us to continue our journey of academic excellence.

Noteworthy Achievement: Secured Prestigious Seed Grant for IoT Project

Dr. Rohit Kanauzia, the Head of Cyber Security Department, in collaboration with Ms. Priyana Suyal and Mr. Kamal Kumar Gola, Assistant Professors in the AI-ML Department, has recently achieved a noteworthy feat by securing a prestigious seed grant of ₹1,10,000/- (One Lakh Ten Thousand only) from the Uttarakhand Science Education and Research Centre (USERC), Dehradun, Government of Uttarakhand. This grant, officially conferred on 30th November 2023, marks a significant milestone for our academic community.

Under the project titled "The Internet of Things: Building a Connected World," the team is poised to explore the realms of IoT, offering the promise of groundbreaking insights and contributions to the ever-evolving field. Ms. Priyana Suyal will lead the project as the Principal Investigator, while Dr. Rohit Kanauzia and Mr. Kamal Kumar Gola, will collectively serve as the Co-Principal Investigators.

The department congratulates the team and eagerly anticipates the innovative outcomes that will undoubtedly emerge from this exciting endeavor.

Faculty Birthday Celebrations: Fostering Community and Appreciating Contributions

Throughout the month of November 2023, the department resonated with a spirit of celebration as it came together to commemorate the birthdays of five esteemed faculty members, namely Ms. Akansha Jain, Ms. Renu Bahuguna, Ms. Soumya Upadhyay, Mr. Sharad Kumar Singh and Ms. Akshima Aggarwal. The festivities were a testament to the department's commitment to fostering a warm and inclusive community.

The celebration unfolded as a thoughtful and personalized affair, tailored to honor the unique contributions and personalities of each faculty member. Ms. Akansha Jain, recognized for her scholarly endeavors and dedication, was acknowledged in a manner that reflected her academic prowess and commitment to excellence. Similarly, Ms. Renu Bahuguna, whose influence in the department had been marked by both mentorship and camaraderie, was celebrated for her impactful presence.



Ms. Soumya Upadhyay, Mr. Sharad Kumar Singh and Ms. Akshima Aggarwal, each with their distinct roles and expertise, were also honored during this festive occasion. The departmental gathering served not only as an opportunity to express gratitude for their contributions but also as a chance for colleagues to come together in a spirit of unity and appreciation.

The celebration was more than a routine observance; it underscored the department's emphasis on building a positive and supportive work environment. Colleagues shared anecdotes, expressions of admiration and well-wishes, creating a sense of camaraderie that extended beyond the confines of professional roles.

The inclusive nature of the celebration reflected the department's understanding of the importance of recognizing and valuing the individuals who contribute to its academic and communal fabric. As the month of November unfolded, these festivities not only added a touch of joy and camaraderie to the department but also strengthened the bonds among faculty members, fostering a sense of unity and shared purpose..

Internal Audit-II : Rigorous Review of Academic Processes

In November 2023, the department initiated an integral process, Internal Audit-II, to conduct a thorough review and verification of the academic processes and overall development within its purview. The audit, facilitated by the Programme Assessment Committee, emerged as a pivotal undertaking in the department's commitment to quality assurance and continuous enhancement of its academic landscape.

The focal point of Internal Audit-II was the comprehensive evaluation of academic processes and developmental initiatives within the department. Spearheaded by the Programme Assessment Committee, a body typically comprising experienced faculty members and academic administrators, the audit was designed to provide a holistic perspective on the department's functioning.

The outcomes of Internal Audit-II were not merely compliance-related; rather, they became a valuable resource for the department's future trajectory. The Committee's findings and recommendations served as a foundation for refining policies, enhancing academic practices and aligning the department's strategies with University goals.

Exceptional Achievement in NPTEL Course: Securing Top Position

In a testament to academic prowess, Ms. Kanika Agrawal, Assistant Professor, in the department has attained the highest rank in the NPTEL course "Operating System Fundamentals." This course, conducted from July to October 2023, was orchestrated by IIT Kharagpur.

Ms. Kanika Agrawal's ascendancy to the top position is a testament to her unwavering dedication, tireless efforts and exceptional mastery of the subject matter. Her steadfast commitment to academic excellence and a profound understanding of the intricacies of operating systems distinguish her as an exemplary performer in the course.

Attaining the pinnacle in a prestigious NPTEL course organized by IIT Kharagpur marks a significant milestone, showcasing not only Ms. Kanika Agrawal's individual

brilliance but also underscoring the academic rigor and excellence instilled within our educational community.

The department extends its congratulations to her for this remarkable feat. Her triumph is not only a source of pride for her but also a wellspring of inspiration for her peers and the entire academic community.



Her achievement in securing the top position in the NPTEL course "Operating System Fundamentals" stands as a shining example of the academic excellence nurtured within our institution. We applaud her for this outstanding accomplishment and eagerly anticipate witnessing her continued success in her academic pursuits.

Dr. Maneesh Research Paper on Health Diagnostics

Dr. Maneesh Kumar, an accomplished Assistant Professor in the Department, has made a significant contribution to scientific knowledge with the publication of his research paper titled "Detection of Plasma, Platelets, Hemoglobin in Blood Sample of Dengue Malaria Based on Surface Plasmon Resonance Biosensor Using Black Phosphorus: A Numerical Analysis."

This publication represents a commendable milestone in the field, showcasing Dr. Kumar's expertise and dedication to advancing scientific understanding. The research delves into the crucial realm of health diagnostics, specifically focusing on the detection of plasma, platelets and hemoglobin in blood samples afflicted with Dengue and Malaria.

The utilization of a Surface Plasmon Resonance Biosensor employing Black Phosphorus adds a layer of innovation to the study. The numerical analysis conducted in the research not only demonstrates a meticulous approach but also contributes valuable insights that can have practical implications in diagnostic technologies.

Dr. Kumar's work is of paramount importance, bridging the gap between theoretical knowledge and its application in

addressing health challenges. This publication not only adds to the academic prestige of the department but also underscores its commitment to cutting-edge research with potential real-world impact.

Plasmonics
https://doi.org/10.1007/s11468-023-01113-3

RESEARCH

Detection of Plasma, Platelets, Hemoglobin in Blood Sample of Dengue Malaria Based on Surface Plasmon Resonance Biosensor Using Black Phosphorus: A Numerical Analysis

Prem Kumar¹ · Rajeev Kumar² · M. K. Singh³ · Bilal Ahmed⁴

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Abstract
The present work focuses on the detection of dengue virus using a proposed copper (Cu) and black phosphorus (BP)-based SPR sensor. This proposed sensor is capable of detecting normal and infected blood samples containing plasma, platelets and hemoglobin. We studied the performance parameter at optimized Cu layer thickness of the proposed sensor by calculating that the maximum sensitivity (S_p) is 106.52% (at 226.77°), and 295.50% (at 46_{max} values with 27 nm, 27 nm and 21 nm thickness of Cu layer for the detection of plasma, platelets and hemoglobin in the blood sample of dengue malaria. The properties of BP combined with the unique plasmonic properties of SPR sensors can result in enhanced interactions between surface plasmons and incident light. These results are intended for improved sensitivity and remarkable figure of merit (FoM). We also calculated the electric field and penetration depth (PD) for the same sample. In this study, the normal and infected blood samples are successfully examined for the performance parameters for the plasma, platelets and hemoglobin.

Keywords Surface plasmon resonance · Sensitivity · Electric field intensity · Penetration depth

Introduction
The surface plasmon resonance (SPR) biosensor is a sensing device used in chemical and biosensing applications like medical diagnostics, enzyme detection, drug diagnostics, food safety testing [1–8] etc. Among the modern sensor techniques based on SPR sensors, they are used in biochemistry and biological as they have some properties like high sensitivity, fast response and real time capability in a label free platform [9–12]. SPR sensor is suitable for detecting the molecules because of its larger shift results in the generation of an evanescent wave at the boundary between a metal and a dielectric material [9, 14]. The SPR condition only occurs when incident light effectively couples with the surface plasmon wave (SPW) [9, 15, 16]. Essentially, the SPR sensor is examined for its reflectance curve at which resonance condition is achieved. At minimum reflectance, the resonance condition is obtained, at which point the energy is completely transferred from the evanescent wave to the surface plasmon polaritons (SPPs). The SPR sensor depends on the SPR wave induced by an evanescent wave that is the result of the attenuated total reflectance (ATR) generated at the prism-metal interface [1]. When the evanescent wave is matched to the surface plasmon (SP) wave-vector occurring in the SPR surface, the reflectance curve

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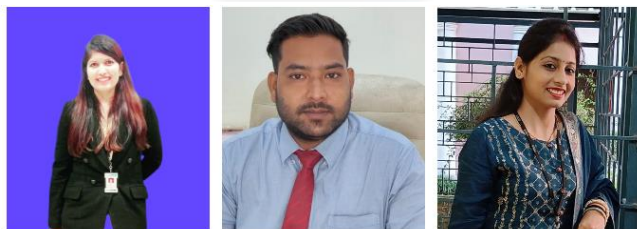
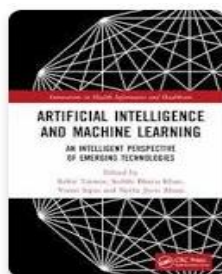
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Dr. Kumar's research paper serves as an inspiration for students and peers alike, highlighting the significance of pushing the boundaries of knowledge for the betterment of society and healthcare.

Publication Announcement: Book Chapter in Scopus Indexed Journal

The achievement of Ms. Sarthika Dutt, Dr. Rohit Kanauzia and Ms. Aditi, who have co-authored two book chapter publications (Scopus indexed) of considerable academic significance.



The titles of these chapters are "Multilayer Perceptron-Based Speech Emotion Recognition for Identifying the Problematic Skills of Dyslexic Learners" and "Reliability and Validity of

Survey Questionnaires for Identifying Learning Disabilities in an Intelligent Tutoring System."

The collaborative effort of these authors has resulted in publications that not only showcase their individual expertise but also contribute significantly to the broader academic community. The first chapter addresses the innovative application of Multilayer Perceptron in Speech Emotion Recognition to identify problematic skills in dyslexic learners, shedding light on an intersection of technology and education with potential real-world impact.

The second chapter delves into the crucial area of reliability and validity in survey questionnaires, specifically focusing on identifying learning disabilities within an Intelligent Tutoring System. This research contributes to the ongoing discourse on effective assessment tools and methodologies for recognizing and addressing learning challenges.


The fact that these publications are indexed in Scopus adds an additional layer of recognition to the scholarly impact of this work. Scopus indexing signifies that the research is recognized on a global scale, providing visibility and credibility within the academic community.

These book chapters are now available online, allowing scholars, researchers and educators to access and benefit from the insights shared by Ms. Sarthika Dutt, Dr. Rohit Kanauzia and Ms. Aditi.

We extend our congratulations to them for their impactful contributions to the field of education and technology.

Successful Completion of 12-Week NPTEL Course

Ms. Anshoo Bhatia, Assistant Professor in the department, has successfully completed a 12-week NPTEL course on "Problem Solving Through Programming in C"



NPTEL Online Certification
(Funded by the MoE, Govt. of India)

This certificate is awarded to
ANSHOO BHATIA
for successfully completing the course

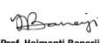
Problem Solving Through Programming in C

with a consolidated score of **50 %**

Online Assignments	10.25/25	Proctored Exam	39.44/75
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Total number of candidates certified in this course: 3857

Jul-Oct 2023
(12 week course)



Prof. Haimanti Banerji
Coordinator, NPTEL
IIT Kharagpur



Indian Institute of Technology Kharagpur



Roll No: NPTEL23CS121S545800032 To verify the certificate

No. of credits recommended: 3 or 4

This achievement underscores Ms. Bhatia's commitment to continuous learning and her dedication to enhancing her proficiency in programming. The NPTEL course, renowned for its academic rigor, covered a diverse range of topics related to problem-solving strategies using the C programming language. Ms. Bhatia actively engaged in the

structured curriculum, delving into fundamental concepts of programming and problem-solving methodologies.

Her successful completion of this course not only reflects her personal dedication to professional development but also holds significant promise for the department's academic enrichment. We anticipate that Ms. Bhatia's enhanced knowledge will positively impact her teaching methodologies and contribute to the ongoing refinement of the department's curriculum.

Celebrating Excellence: Triumph at Rialtes Technologies and Solution LLP

In a moment of immense pride and accomplishment, the achievement of Mr. Anmol Ratan Tiwari, a distinguished 4th-year student in our esteemed department. His unwavering dedication, academic brilliance and exemplary skills have culminated in the acquisition of a highly sought-after placement at Rialtes Technologies and Solution LLP in Pune, Maharashtra.

Mr. Tiwari's educational journey serves as a shining example of his relentless pursuit of excellence. Throughout his academic tenure, he has consistently demonstrated a profound passion for learning and an unwavering commitment to expanding the horizons of knowledge. His academic achievements and active participation in various extracurricular activities have distinguished him as a well-rounded and accomplished student.



The placement at Rialtes Technologies and Solution LLP is a testament to Mr. Tiwari's exceptional technical acumen and adept problem-solving abilities. Renowned for its cutting-edge solutions in the tech industry, the company has recognized the immense potential in our students, with Mr.

Tiwari standing out as a prime example. His selection underscores the quality of education and practical exposure provided by our department, reinforcing our commitment to nurturing talent and fostering holistic development.

Beyond celebrating an individual success story, we take this moment to acknowledge the collective efforts of our dedicated faculty and the nurturing academic environment that consistently cultivates the growth of outstanding students like Mr. Tiwari. The department takes immense pride in being a pivotal stepping stone for the flourishing careers of our students.

As Mr. Tiwari embarks on this exciting new chapter, we extend our warmest congratulations and heartfelt best wishes for a bright and fulfilling career ahead. We hold steadfast confidence that he will bring the same level of dedication and excellence to the professional arena as he has demonstrated within our academic community.

Securing Internship at Schoyo Technologies LLP



Mr. Tahseen Aasif, a fourth-year student in the department, has achieved a significant milestone by securing an internship position at Schoyo Technologies LLP. Mr. Aasif's accomplishment is marked not only by the prestigious nature of the internship but also by the commendable stipend of ₹10,000 per month that he will receive during his tenure with the company.

This internship opportunity is a testament to Mr. Aasif's academic prowess, dedication and practical skills that have made him stand out among his peers. Schoyo Technologies LLP, known for its innovation and cutting-edge projects, provides an ideal platform for Mr. Aasif to apply his theoretical knowledge in a real-world professional setting.

The stipend reflects the value that the company places on Mr. Aasif's contributions and is a testament to his capabilities. The department extend congratulations to Mr. Tahseen Aasif for securing this prestigious internship and we anticipate that this experience will not only contribute significantly to his personal and professional development but will also serve as an inspiration for his fellow students. This achievement reflects the high standards of our

institution and the caliber of our students in the competitive professional landscape.

Successful Clearance of SQL (Basic) Assessment on HackerRank

Ms. Harshit Bathla, a student in our department, who has successfully cleared the assessment for SQL (Basic) skills on HackerRank. This accomplishment not only showcases her dedication and proficiency in SQL but also reflects positively on the department's commitment to nurturing and recognizing the talents of its students.

The assessment on HackerRank, a widely recognized platform for coding challenges and assessments, signifies a robust validation of her understanding of fundamental SQL concepts. The successful clearance of this assessment highlights her strong grasp of database management and SQL queries, essential skills in the field of information technology and data management.



Her achievement is a testament to her diligence, commitment to self-improvement and the quality of education provided by the department. It also positions her as a standout performer in the realm of SQL proficiency, a skill set highly sought after in the tech industry.

This accomplishment is not only a personal triumph for Ms. Bathla but also a source of pride for the department. It exemplifies the success of our students in acquiring practical skills that align with industry standards.

Successful Completion of Coursera Certification on 'Connect and Protect: Networks and Network Security'

Mr. Prashant Kumar, a second-year student in our department, who has successfully completed the Coursera Certification on "Connect and Protect: Networks and Network Security." This accomplishment signifies Mr.

Kumar's commitment to expanding his knowledge and expertise in the critical domains of networking and security. The Coursera certification, known for its comprehensive and industry-relevant content, covers a spectrum of topics related to networks and network security. Mr. Kumar's successful completion of this certification underscores not only his dedication to continuous learning but also his keen interest in staying abreast of the latest advancements in information technology.

Throughout the certification program, Mr. Prashant Kumar engaged with a curriculum designed to provide a deep understanding of networking fundamentals and the intricacies of network security. The coursework encompassed theoretical concepts, practical applications and real-world scenarios, ensuring a well-rounded and practical learning experience.



Mr. Kumar's achievement is not only a personal milestone but also a testament to the department's commitment to fostering a culture of academic excellence and professional development. It reflects the success of our students in acquiring skills that are directly applicable to industry needs. The "Connect and Protect: Networks and Network Security" certification from Coursera is recognized as a significant validation of Mr. Prashant Kumar's proficiency in these crucial areas. We extend our heartfelt congratulations to Mr. Kumar on this noteworthy accomplishment and look forward to witnessing the positive impact of his enhanced knowledge in the academic and professional spheres.

Successful Placement at Career Mantra Pvt Ltd

Mr. Paritosh Verma and Ms. Tanishka Shree, both final-year students in our department, who have secured placements in Career Mantra Pvt Ltd. This accomplishment is not only a testament to their academic excellence but also reflects the department's commitment to preparing students for successful careers in their chosen fields.

Both Mr. Paritosh Verma and Tanishka Shree have been offered positions at Career Mantra Pvt Ltd with an



impressive package of ₹ 9.2 LPA. This competitive placement is a testament to their exceptional skills, dedication and the quality of education provided by the department.



The successful placement of these students is a source of pride for our institution, highlighting our commitment to providing students with the necessary knowledge and skills to excel in the professional world. It also serves as an inspiration for their peers, demonstrating that academic excellence and a proactive approach to learning can lead to rewarding career opportunities.

The achievement of Mr. Paritosh and Ms. Tanishka is a reflection of the strong collaboration between the department, faculty and students. We extend our heartfelt congratulations to both of them and wish them continued success and growth in their professional journeys.

Celebrating Success: Web Development Internship Achievement

Ms. Harshita Bathla, a talented first-year student, who has recently completed a one-month internship in web development and designing with Oasis Infobyte.



Over the past month, Harshita has immersed herself in the dynamic world of web development, acquiring hands-on experience and invaluable insights. Under the guidance of the experts at Oasis Infobyte, she has honed her skills and mastered the art of creating visually appealing websites.

Throughout the internship, Harshita dedicated herself to learning the intricacies of web development, showcasing not only her commitment but also her passion for the field. She embraced the challenges and emerged victorious, demonstrating an impressive understanding of what it takes to craft an attractive and functional website.

The department extends congratulations to Ms. Harshita Bathla on this significant accomplishment. We look forward to witnessing her continued growth and success in the exciting world of web development.

Forthcoming in December 2023

1. Alumni Meet.
2. Foundation Day.
3. End Semester Examination.
4. Staff Development Programme.

Thank you for being a part of our journey! Stay vigilant, stay secure and stay connected with us for more updates and insights. Until next time, keep your digital world safe! We are constantly striving for excellence and value your input. Please feel free to share your feedback and suggestions with us at hod.cy@coerUniversity.ac.in. Your insights are important to us.



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