St. PETER'S
INSTITUTE OF HIGHER EDUCATION & RESEARCH
(DEEMED TO BE UNIVERSITY u/s 3 OF THE UGC ACT 1956)
Accredited by NAAC with A+ Grade, AICTE Approved and
ISO 9001: 2015 Certified.
Avadi, Chennai - 600 054, Tamil Nadu.

ANNUAL PROGRESS REPORT FOR SDG 4 – 2024

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17.3.4. University publishes progress against SDG 4

Sustainable Development Goal 4 aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. It emphasizes access to education at every level—early childhood, primary, secondary, and higher education—while improving learning outcomes and eliminating disparities. SDG 4 also focuses on developing the knowledge, skills, and values needed for sustainable living, gender equality, global citizenship, and employability. By fostering literacy, innovation, and critical thinking, quality education empowers individuals and communities, drives economic growth, and lays the foundation for achieving all other SDGs.

The NEP 2020 talks about that every child learns at least one vocation and is exposed to several more. This would lead to emphasizing the dignity of labour and importance of various vocations involving /Indian arts and artisanship. (NEP 2020).At SPIHER Institution tries to build the Vocational base of our learners. There is emphasis on Art, Agriculture, Media, Radio, Dance and Drama at SPIHER. As NEP 2020 points out we provide several choices to our learners to perform well in life. We strive to give a holistic education to our students by uniting their education to a lived reality. We need to make education more lively and practical to our learners. This will also reap rich dividends to the students at SPIHER. As they will also learn to be employable. Additionally, the computer labs also give our learners the opportunity to polish and maintain their computer literacy. This is an absolute necessity in our times.

<u>Exploring an array of bio-careers with Lab demonstration on Gene Mining</u>

Event Name: "Exploring an array of bio-careers with Lab demonstration on Gene Mining"
Organized by: Department of Biotechnology
Date : 11.09.2024
Time : 10.00 am - 1.00 pm & 2.00 pm to 4.00 pm

Event Title	"Exploring an array of bio-careers with Lab demonstration on Gene Mining"
Organized by	Department of Biotechnology
Date and Time	11.09.2024 at 10.00 am - 1.00 pm & 2.00 pm to 4.00 pm
Convener	Dr. S. Chandra, Professor-Biotechnology
Participants details	Students: 65 - UG and PG students of Life Sciences

Speaker details	Dr. Prem kumar Albert, Visiting Scientist, Spanish National Research Council (CSIC), Instituto de Recursos Naturales y Agrobiologia (IRNAS), Plant Biotechnology Department, Sevilla, Spain.
Key Point discussed	1. Genome sequence of an organism 2. Detection and annotation of biosynthetic gene clusters from genomic data 3. *Arabidopsis thaliana* gene mining
Feedback received from the participants	All the participants were delighted to attend and were very happy to be a part of this workshop.
No. of Participants	65
Facebook link	https://www.facebook.com/share/p/dbepPMehvSy9uADi/
Instagram Link	https://www.instagram.com/p/C_xGolnvDPe/?igsh=cnYxN3l5NTc0eGEx

Programme Brochure

Felicitation and Interaction of the Chief Guest, Dr. Prem kumar Albert, Visiting Scientist, Spanish National Research Council (CSIC)

Group photo

In this workshop, the Chief Guest delivered an insightful lecture covering:

1. Understanding genome sequences of organisms
2. Detection and annotation of biosynthetic gene clusters
3. Gene mining approaches using *Arabidopsis thaliana*

In addition to the lecture, a hands-on demonstration engaged students in practical gene-mining techniques, enhancing their understanding of modern genomic tools and bioinformatics applications. Participants expressed high levels of satisfaction and shared that the workshop significantly enriched their exposure to advanced biotechnological research and global career opportunities in the biosciences. The hands-on lab demonstration provided students with experiential learning opportunities, strengthening their competencies in modern biotechnology.

The workshop directly supported SDG 4 by promoting high-quality, research-oriented education, fostering global scientific exposure, and equipping students with knowledge and practical skills relevant for future academic and career development. Participants expressed great satisfaction and appreciated the valuable international academic engagement.

Public links

https://www.facebook.com/share/p/dbepPMehvSy9uADi/

https://www.instagram.com/p/C_xGolnvDPe/?igsh=cnYxN3l5NTc0eGEx

https://www.linkedin.com/posts/spiherchennai_biotechcareers-genemimicking-qualityeducation-activity-7239524206088966147-OwaB?utm_source=share&utm_medium=member_android

https://x.com/SpiherIndia/status/1833758661371662493?t=zZIZDRUu6jhGuJro__Hn4g&s=19

Research Article published under SDG 4

Sharma SK, Sultana S, Singanan P. Green Synthesis and Analytical Technique for the Separation of Substituted Chlorophenyl Hydrazine Isomers by Reverse Phase HPLC Method. Rasayan J Chem. 2024 Oct 1;17(4):1924-33.

RJC

RASĀYAN *J. Chem.*
Vol. 17 | No. 4 |1924-1933| October - December | 2024
ISSN: 0974-1496 | e-ISSN: 0976-0083 | CODEN: RJCABP
http://www.rasayanjournal.com
http://www.rasayanjournal.co.in

GREEN SYNTHESIS AND ANALYTICAL TECHNIQUE FOR THE SEPARATION OF SUBSTITUTED CHLOROPHENYL HYDRAZINE ISOMERS BY REVERSE PHASE HPLC METHOD

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[2]Research and Development, Zenfold Sustainable Technologies Pvt Ltd, Bangalore 560099, (Karnataka), India
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ABSTRACT

4-Chlorophenylhydrazine hydrochloride (4-CPH) is a crucial intermediate in organic synthesis, utilized in various applications including the production of Carprofen and wastewater treatment. This study focuses on the synthesis and impurity analysis of 4-CPH on green approach, with particular emphasis on the detection and quantification of positional isomers 2-Chlorophenylhydrazine hydrochloride (2-CPH), 3-Chlorophenylhydrazine hydrochloride (3-CPH), and 4-Chloroaniline. A high-performance liquid chromatography (HPLC) method was developed using a Waters X-Bridge C18 column and optimized for resolution and sensitivity. The method demonstrated effective separation, with detection limits for 2-CPH, 3-CPH and 4-Chloroaniline at 0.02%, 0.04%, and 0.02% respectively. The validated HPLC method provides reliable analysis for the quality control of 4-CPH, ensuring low impurity levels in the final product.

Keywords: Green Approach, 4-Chlorophenylhydrazine, RP HPLC, Positional Isomer Separation, Genotoxic Impurity.

INTRODUCTION

4-Chlorophenylhydrazine hydrochloride (4-CPH) (**2a**) is an important substituted phenylhydrazine[1] in organic synthetic chemistry, specifically used as an intermediate and raw material. It is often referred to as a non-heterocyclic building block in synthetic chemistry. This compound is a colorless to light yellow crystalline solid that is soluble in water and methanol. 4-CPH is synthesized from 4-chloroaniline.[1] 4-CPH is used as an intermediate in the synthesis of Carprofen[2], a well-known nonsteroidal anti-inflammatory analgesic with antipyretic activity.[3,4] Also, it is an important intermediate of Edaravone, which is used to treat stroke and amyotrophic lateral sclerosis (ALS).[5] Additionally, 4-Chlorophenylhydrazine hydrochloride has been shown to react with acidolysis, which can be utilized for wastewater treatment.[6] Substituted phenylhydrazines serve as key starting materials in Fischer indole synthesis, as indole ring moieties are important structural components in diverse natural pharmaceutical agents.[7] Among various methods to synthesize and functionalize indole moieties, the Fischer indole synthesis (FIS) is the most well-established and practical strategy. One example is demonstrated by Sperry *et al.*, who used 4-Chlorophenylhydrazine as a precursor to carry out FIS, generating a pentacyclic spirobisindole.[8] 2-CPH (**2b**), 3-CPH (**2c**), and 4-Chloroaniline (**1**) are impurities generated during the chemical synthesis of 4-CPH (**2a**). Process impurities are identified through various chromatographic and spectroscopic techniques, either independently or in conjunction with other methods. High-performance liquid chromatography (HPLC) has been extensively utilized in impurity profiling due to its diverse applications facilitated by a broad selection of detectors and stationary phases. Its sensitivity and cost-effective separation capabilities contribute to its widespread use.[9]

Detecting and quantifying 2-CPH and 3-CPH during the production of 4-CPH is challenging, as these are aromatic positional isomers. 2-CPH, 3-CPH and 4-Chloroaniline impurities significantly impact the purity and effectiveness of 4-CPH. Completely removing these impurities from the product is strenuous. Therefore, it is crucial to achieve a substantial reduction in the levels of 2-CPH, 3-CPH and 4-Chloroaniline

Rasayan J. Chem., 17(4), 1924-1933(2024)
http://doi.org/10.31788/RJC.2024.1749036

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SDG 4

Lifelong learning measures

4.3.1 - University as a body provide free access to educational resources for those not studying at the university, e.g. computers, library, online courses, access to lectures, etc?

Yes. St. Peter's Institute of Higher Education and Research (SPIHER) actively promotes equitable access to quality education for learners beyond its enrolled students. The university provides free and open access to a range of educational resources and opportunities for individuals not formally studying at the institution.

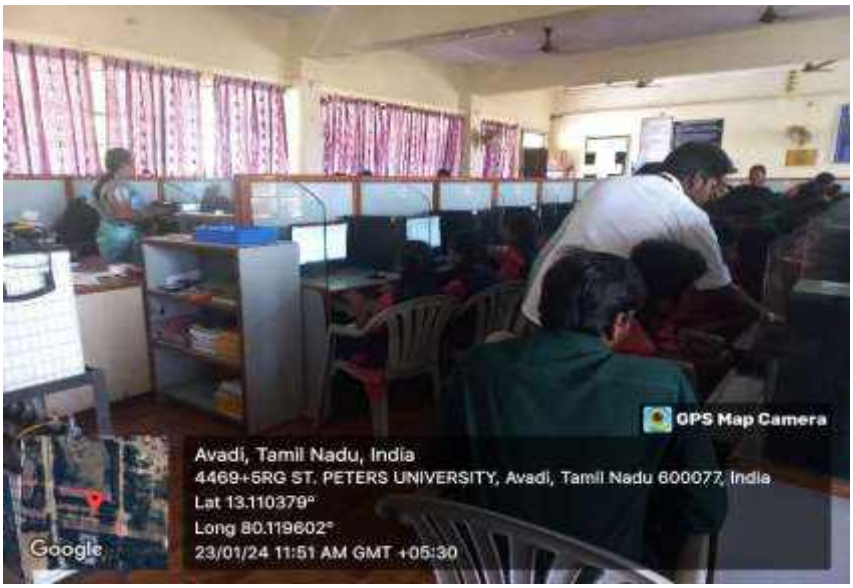
The Central Library serves as a knowledge hub not only for students and staff but also for external learners and researchers. It provides access to an extensive collection of books, journals, and digital resources. The library also organizes training sessions, workshops, and awareness programme on information literacy and effective resource utilization, which are open to the public.

Free and open access to library resources

Our university welcomes the public to attend many of our lectures and learning events. This helps people from outside the campus also gain new knowledge and stay updated.

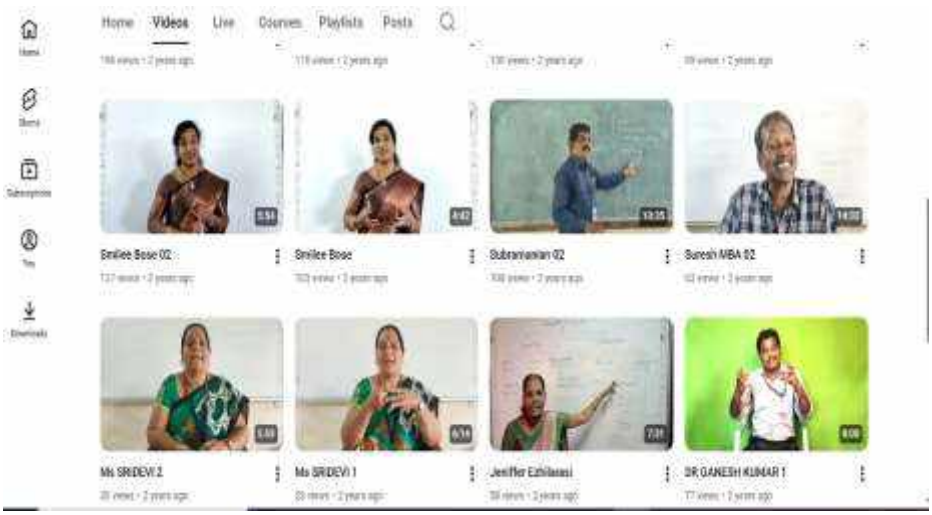
Free access to lectures

We allow school students and community members to use our computer labs during special outreach visits. This gives them hands-on experience with technology and supports digital learning.



Free access to educational resources – Computers

We share lecture resources through our website, so that anyone who is interested can learn and benefit from them even without being a student here.



Free Access to Online Resources and Lectures

Online Access Resources Link: https://spiher.ac.in/lectures/

4.3.2 - University as a body host events at university that are open to the general public: public lectures, community educational events

Yes. St. Peter's Institute of Higher Education and Research (SPIHER) regularly hosts a variety of educational and community-oriented events that are open to the general public, thereby fostering lifelong learning and community engagement.

SPIHER organizes enhancement programmes from time to time that focus on life skills development aimed at improving the overall quality of life. These sessions cover vital aspects such as healthy living, physical and psychological well-being, stress management, nutrition, and immunity building. The goal is to empower participants with practical skills for a balanced and productive lifestyle.

The institution also takes pride in strengthening soft skills among participants through workshops and events emphasizing leadership, decision-making, communication, and critical reasoning**.** One of the key initiatives supporting this effort is the SPIHER Radio Channel**,** which serves as a unique platform where education meets community. It broadcasts discussions, awareness programmes, and interviews that reach both students and the general public.

In addition, SPIHER conducts health awareness camps**,** medical check-up drives**,** and fitness campaign**s** in collaboration with local healthcare providers. These initiatives promote health consciousness and community well-being. The university also emphasizes sports, yoga, and recreational activities as integral to holistic education and community interaction.Through these public events, SPIHER ensures that education extends beyond academic boundaries and contributes meaningfully to the social, physical, and emotional enrichment of the wider community.

St. PETER'S
Institute of Higher Education & Research

NATIONAL SERVICE SCHEME (NSS)

Organizes

NASHA MUKT BHARAT ABHIYAN

Serenity Sessions: Exploring Yoga and Meditation

04.09.2024 10.00AM

Yoga & Meditation Centre, SPIHER

Guest

Mr. L. Saravanan
DME, MSc
THE art of living Teacher
Sky Yoga Professor

Coordinators

Dr.P.Periyasamy
NSS Coordinator
SPIHER

Dr.S.Akila
Asst. Prof. CSA
SPIHER

Mrs. R. Vijayalakshmi
NSS Event Coordinator
SPIHER

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Event at university that are open to the general public – Community Educational Events

Reference Link:

https://www.instagram.com/p/C_xFlWuPmYO/?igsh=M2huOHV4ODNxYzN3

https://x.com/SpiherIndia/status/1833756606221197520?t=o2-Sun20nNw5RkYXVPUUpw&s=19

https://www.facebook.com/share/p/96N8d15yufKNr1MT/?mibextid=qi2Omg

https://www.linkedin.com/posts/spiherchennai_nashamuktbharat-yogaandmeditation-serenitysessions-activity-7239522068180934657-Kkkn?utm_source=share&utm_medium=member_android

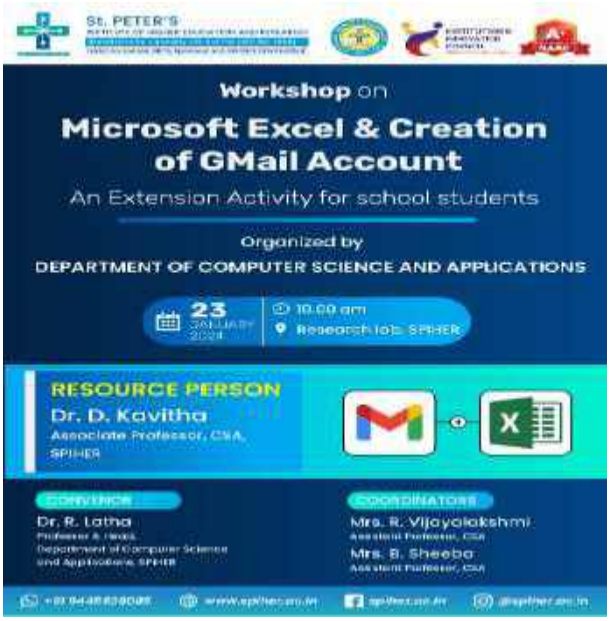
4.3.3 - **University as an educational body host events at university that are open to the general public: executive education programmes (this refers to short courses for people who are not attending the university; this specifically excludes courses like MBA) and/or vocational training**

Yes, St. Peter's Institute of Higher Education and Research (SPIHER) actively contributes to lifelong learning and community skill development by hosting Executive Education Programmes and Vocational Training Courses that are open to the general public. These initiatives are designed to equip individuals — including working professionals, entrepreneurs, and unemployed youth — with industry-relevant skills and practical knowledge that enhance employability and career advancement.

SPIHER offers a wide range of training programmes in areas such as Information Technology, Office Automation, Communication Skills. These programmes are conducted ensuring that participants receive up-to-date, hands-on experience aligned with current market needs.

The university's Skill Development Cell, Entrepreneurship Development Cell (EDC), and Incubation Centre also organize specialized workshops and bootcamps that promote innovation, start-up culture, and business management skills. Many of these sessions are open to the public and have benefited local community members, small business owners, and aspiring entrepreneurs.

Additionally, SPIHER conducts vocational training programmes under institutional initiatives to empower rural youth, women, and underprivileged sections of society, thereby contributing to inclusive socio-economic growth.



Workshop on Microsoft Excel & Creation of Gmail Account

Conducted at university that are open to the general public: School Students

Workshop on Microsoft Excel & Creation of Gmail Account

The Department of Computer Science and Applications, St. Peter's Institute of Higher Education and Research (SPIHER), organized an extension activity-based workshop titled "Microsoft Excel & Creation of Gmail Account" for school students. The event was designed to enhance the digital literacy and productivity skills of young learners by familiarizing them with essential computer applications.

The workshop was conducted on 23rd January 2024 at 10:00 AM in the MCA Lab, SPIHER. The session was led by the Resource Person, Dr. D. Kavitha, Associate Professor, Department of Computer Science and Applications, SPIHER, who guided the students through the fundamentals of Microsoft Excel, including basic editing, formatting features, and functions that support data handling. Additionally, students were trained on creating and using Gmail accounts for communication and educational purposes.

Under the guidance of Dr. R. Latha, Professor & Head, CSA, and Workshop Convenor, the event was well-coordinated by Mrs. R. Vijayalakshmi and Mrs. B. Sheeba, Assistant Professors from the Department of Computer Science and Applications.

The workshop received enthusiastic participation from school students, who actively engaged in hands-on practice sessions. The activity successfully contributed to strengthening foundational ICT skills among the participants, aligning with SPIHER's mission to promote community outreach and digital empowerment.

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6 TRINITY MIRROR WEDNESDAY 13.3.2024

AWARD

Nalli Kuppuswami Chetty receives Lifetime Achievement Award

PayPal STUDENT

SPIHER conducts student skilling programme

Ichaas opens: Perfect blend of food and music

Conducted at university that are open to the general public: Students

Nasha Mukt Bharat Abhiyan - Serenity Sessions: Exploring Yoga and Meditation

Date: September 4th, 2024
Venue: Yoga and Meditation Centre, SPIHER
Beneficiary: Public

To promote a healthy lifestyle and stress management through yoga and meditation practices for Public.

The NSS unit of SPIHER successfully organized the "Nasha Mukt Bharat Abhiyan - Serenity Sessions: Exploring Yoga and Meditation" on September 4th, 2024, at the Yoga and Meditation Centre, SPIHER. The event aimed to create awareness about the benefits of yoga and meditation in achieving a balanced lifestyle.

The session commenced with a welcome address by Dr. P. Periyasamy, NSS Coordinator, who emphasized the importance of yoga and meditation in today's fast-paced world. The guest speaker, Mr. L. Saravanan, DME, MSc., an Art of Living Teacher and Sky Yoga Professor, led the yoga and meditation practice. He guided the participants through various asanas, pranayama, and meditation techniques, highlighting their benefits for physical, mental, and emotional well-being.The participants, actively engaged in the practice, demonstrating their enthusiasm for adopting a healthy lifestyle. Dr. S. Akila, Assistant Professor, and Mrs. R. Vijayalakshmi successfully coordinated the event, ensuring its smooth execution. Approximately 50 participants participated in the event.

The key highlights of the session include:

- Breathing techniques (pranayama) for stress management
- Yoga asanas for physical flexibility and strength
- Meditation techniques for mental clarity and focus
- Discussion on the importance of mindfulness and self-awareness

The participants expressed their gratitude for the opportunity to learn and practice yoga and meditation techniques. The event concluded with a vote of thanks by Dr. P. Periyasamy, acknowledging the support of the guest speaker, coordinators, and participants.

The NSS unit of SPIHER aims to continue organizing such events, promoting holistic well-being beyond the SPIHER community.

Media Report

6
MIRROR
SPIHER holds sessions on yoga, meditation
Ramakrishna Mission Ashrama Schools' Alumni meet

Publicity on Newspaper - SPIHERS conducts Yoga, Meditation for General Public

4.3.4 - University as a body undertake educational outreach activities (e.g. tailored lectures or demonstrations) beyond campus, e.g. in local schools, in the community, including voluntary student-run schemes?

St. Peter's Institute of Higher Education and Research (SPIHER) actively undertakes a wide range of educational outreach activities beyond its campus to promote inclusive learning and community development. These initiatives are designed to extend the benefits of higher education to local schools, rural communities, and underrepresented groups through both institutional and student-led efforts.

Faculty members and students regularly engage in community lectures, school visits, and interactive demonstrations that inspire young learners and raise awareness on topics such as STEM education, environmental sustainability, digital literacy, and health awareness. These programmes are customized to suit the needs of school students and community members, making learning engaging and accessible.

SPIHER's Community Connect and Unnat Bharat Abhiyan initiatives enable students to participate in voluntary teaching, mentoring, and awareness campaigns in rural and semi-urban areas. Through these, the institution nurtures social responsibility, civic engagement, and empathy among students while uplifting the surrounding communities.

Additionally, departments organize outreach workshops, science exhibitions, and career guidance sessions for school students and teachers to foster curiosity, innovation, and academic preparedness. The NSS and NCC units of SPIHER also contribute significantly by conducting literacy drives, educational camps, and training programmes in collaboration with local organizations and NGOs.

Through these continuous outreach efforts, SPIHER ensures that education transcends institutional boundaries, empowering communities and reinforcing the university's commitment to **"**Education for All.**"**

The **Department of Electronics and Communication Engineering (ECE)**, in association with the **NSS Unit**, conducted a workshop titled **"Electronics Mastery"** on **14th February 2024** from **1:30 p.m. to 4:00 p.m.** The session aimed to introduce school students to the basics of electronics and its growing importance in today's technology-driven world.

The workshop began with a simple **introduction to electronics,** explaining how it influences modern devices and systems. Students were then taught **fundamental concepts** like voltage, current, resistance, and circuits in an easy-to-understand manner.

To make learning more engaging**, hands-on activities and experiments** were conducted, allowing students to work directly with electronic components and build simple circuits. These activities helped them connect theory with real-world applications.

Social Media Links :

Linkedin

https://www.linkedin.com/posts/spiherchennai_nsscamp2024-ubainaction-nationalservicescheme-activity-7162353331120582656-xDiF?utm_source=share&utm_medium=member_android

Instagram

https://www.instagram.com/p/C3MxVJKrMFQ/?igsh=MW1hdXh5NTYza2ZibA==

Facebook

https://www.facebook.com/share/p/i6sbxucQnnC8YpqS/?mibextid=2JQ9oc

Educational Outreach Activity at Local School – Workshop on Electronics Mastery

Educational Outreach Activity at Local School –
Workshop on Electronics Mastery

Educational Outreach Activity

4.3.5 - Does your university as a body have a policy that ensures that access to these activities is accessible to all, regardless of ethnicity, religion, disability, immigration status or gender?

Yes. St. Peter's Institute of Higher Education and Research (SPIHER) upholds a strong commitment to equity, diversity, and inclusion in all its academic and outreach activities. The institution has well-defined policies and practices that ensure equal access and participation for all individuals — irrespective of ethnicity, religion, caste, gender, disability, socio-economic background, or immigration status.

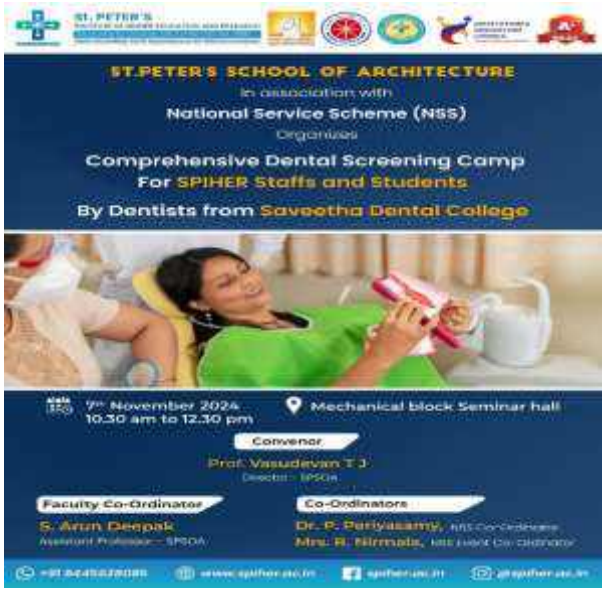
SPIHER's Equal Opportunity Policy, aligned with constitutional and statutory mandates, guarantees a discrimination-free environment across all academic, administrative, and community-based initiatives. The university's Anti-Discrimination Cell, Gender Sensitization Committee, and Grievance Redressal Cell work collaboratively to monitor and uphold inclusivity in every programme and event.

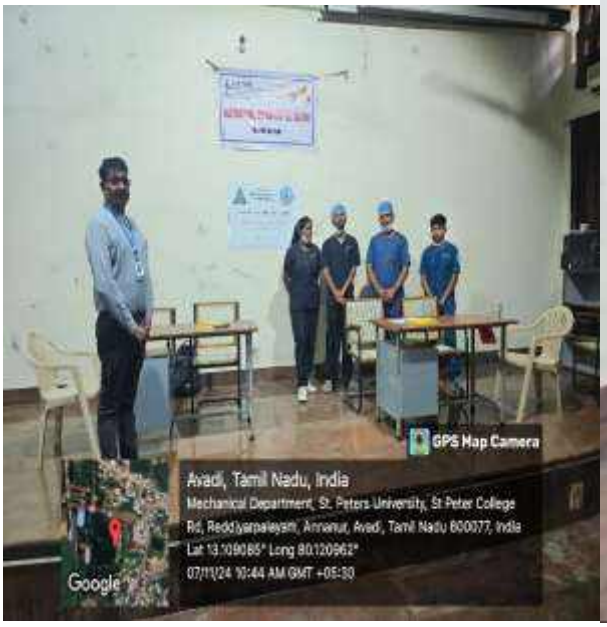
All educational activities, including outreach programmes, training sessions, and community engagement initiatives, are designed and implemented with universal accessibility in mind. Facilities such as ramps, elevators, assistive technologies, and inclusive learning materials ensure that persons with disabilities can participate fully.

Additionally, SPIHER promotes gender equity and social inclusion through awareness drives,

workshops, and sensitization programmes, fostering respect for diversity and cultural harmony among students and staff.

Through these institutional mechanisms and policies, SPIHER ensures that access to education and community engagement remains open, fair, and inclusive for all, reflecting the university's core belief in "Education without barriers."





Activities accessible to all regardless of ethnicity, religion –
Dental Screening Camp

Dental Screening Camp

The **Department of Architecture**, in collaboration with the **NSS Unit**, conducted a Dental Screening Camp on **7th November 2024** inside the university campus. The event was planned with the goal of creating better awareness about oral hygiene and offering free dental check-ups for everyone within and around the university.

A team of trained dental professionals carried out the screenings. They examined the oral health of the participants, shared useful tips on how to take care of teeth and gums, and advised those who needed further treatment. Students, faculty, non-teaching staff and people from the nearby locality took part in the camp and benefited from the service.

This initiative reflected the university's belief in providing equal opportunities for all, without any discrimination based on religion, gender, disability, or background. By opening its doors to the local public, the institution once again showed its commitment to social responsibility and community welfare.

The camp received a positive response and helped spread the message of preventive dental care. Overall, it proved to be a successful outreach activity that supported healthier lifestyles among both the campus community and neighbouring residents.

Activities regardless of ethnicity, religion, gender

Pongal Celebration in the SPIHER campus in the year 2024

Social Media Link:

https://www.linkedin.com/posts/spiherchennai_pongalfestival-spihercelebration-departmentofcommerce-activity-7151170084403613696-377e?utm_source=share&utm_medium=member_android

Activities regardless of ethnicity, religion, gender

Onam Celebration in the SPIHER campus in the year 2024

Social Media Links:

https://www.instagram.com/reel/DAQxtm4MHOA/?igsh=MWwzOTI2ZzRmeW54Yg==

https://www.facebook.com/share/v/tqZHJyXpXyhrJLh5/?mibextid=qi2Omg

https://x.com/SpiherIndia/status/1838228814133928061?t=NoVhVC2Z2L6PzORmNaj_wg&s=19

https://www.linkedin.com/posts/spiherchennai_onamcelebrations-onam2024-spiher-activity-7243995579754676226-9VY3?utm_source=share&utm_medium=member_android

Activities regardless of Ethnicity, Religion, Gender

Christmas Celebration in the SPIHER campus in the year 2024

World Traditional Dhoti Day

Dhoti Day is commemorated on 6th January every year. The Department of Computer Science and Applications marked the celebration of Traditional Dhoti Day on January 12, 2024, with enthusiasm and style. Demonstrating a splendid fusion of tradition and elegance, male students across various departments adorned themselves in formal Veshti paired with shirts, creating a majestic appearance that resonated with the vibrancy of youth.

In a contemporary era where students often find themselves influenced by Western culture, this event served as a meaningful initiative to revive and preserve traditional practices. Recognizing the importance of cultural heritage, UNESCO has officially designated January 6th as World Traditional Dhoti Day, emphasizing the global significance of embracing and preserving traditional attire.

The distinct look and feel of men's attire in Tamil Nadu further added to the richness of the occasion, highlighting the unique and timeless charm of traditional clothing. This celebration not only showcased sartorial elegance but also served as a reminder of the cultural diversity that adds to the tapestry of our global community.

Technical Seminar on "Full Stack Software Development"

On 19th January 2024, the Department of Computer Science and Applications organized a Technical Seminar on "Full Stack Software Development" at the Main Block Seminar Hall as an initiative towards promoting **SDG 4 – Quality Education**. The event, coordinated by Mr. N. Jagadeesh and Mrs. N. Nandhini, aimed to enhance students' practical knowledge and industry readiness in the field of modern software development. The resource person, **Ms. M. Shobana, Tech Head, NIIT Ltd., Chennai**, delivered an insightful session covering the fundamentals of Full Stack Development, technology stack selection, server-side programming, API development, testing methods, and agile project management practices. Around **200 participants** gained valuable exposure to current industry trends and essential development skills, enabling them to pursue advanced learning and career opportunities in the evolving IT sector. The seminar successfully strengthened students' technical competencies and supported inclusive and equitable quality education in line with SDG 4.

Alumni Series – Online Programme from 23rd to 25th January,2024.

The Alumni Series – Online Seminar was organized as part of the Alumni Series by **Department of Computer Science and Applications**. The event aimed to provide current students and recent graduates with valuable insights and advice from successful alumni who have forged their careers in the digital landscape.

Dr. R. Latha , Head of the Department, CSA, SPIHER initiated the series, also she aimed to create a collaborative environment where students could learn from the experiences of alumni and gain a deeper understanding of the evolving demands of the professional landscape.

Mr. Prabakaran Kandasamy, an esteemed alumnus from the MCA 2005-2008 batch, who working as Engineering Manager at APPVIEWX Company, delivered an insightful session on "Cloud Native Landscape: Kubernetes." He elucidated the significance of Kubernetes in modern cloud-native environments, providing practical examples and use cases to illustrate its role in orchestrating containerized applications.

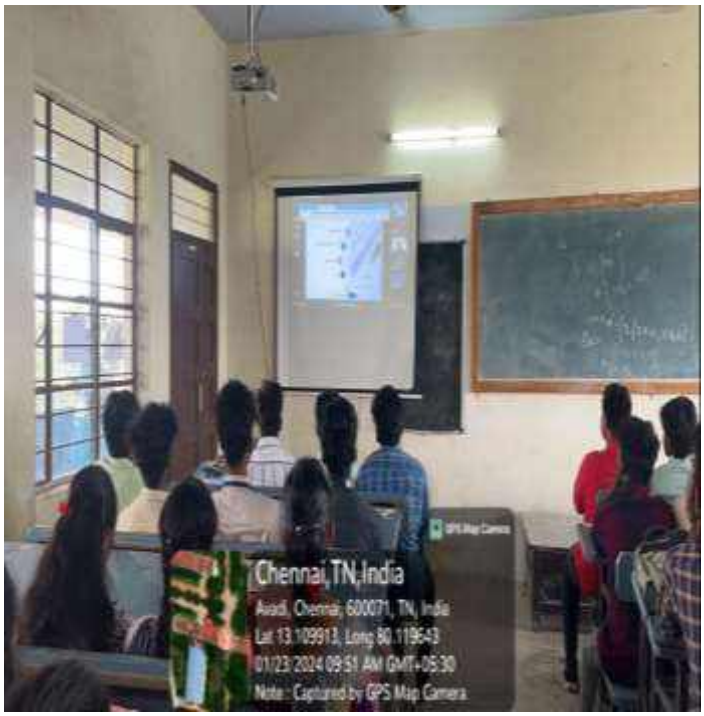
The session saw active participation from attendees, fostering engaging discussions and knowledge sharing.

Mr. Sathish Subburaj, a distinguished alumnus from the MCA 2005-2008 batch, who working as Application Development Manager at Accenture Advanced Technology Centers India, presented a visionary outlook on future technology trends. His session, titled "Technology: A Look Ahead," provided attendees with valuable insights into emerging technologies and their potential impact on various industries. The session concluded with an interactive Q&A session, allowing participants to delve deeper into the subject matter.

Dr. E. Edwin Lawrence, an esteemed alumnus from the MCA 2005-2008 batch, who working as Executive Director at Merit Group of Institutions, delivered an enlightening session on "Data Security and the Race for Encryption Standards in the Post-Quantum World." He explored the evolving landscape of data security in the wake of quantum computing advancements, emphasizing the importance of robust encryption standards. Attendees gained valuable insights into the challenges and opportunities presented by this paradigm shift in cybersecurity.

The Alumni Series spanning three days brought together distinguished alumni from diverse professional backgrounds to share their expertise and insights with fellow alumni and participants. The sessions, covering topics ranging from cloud-native technologies to future technology trends and cybersecurity, provided attendees with a comprehensive understanding of contemporary issues and emerging trends in the tech industry. The event was a testament to the spirit of knowledge sharing and collaboration within the alumni community, reaffirming the importance of such initiatives in fostering continuous learning and professional development.

St. PETER'S
Alumni Series - Online Seminar
Organized by
Department of Computer Science and Applications
From
23rd to 25th January 2024
https://meet.google.com/ndg-tuyj-vkw
Resource Persons
Mr. Prabhakaran Kandasamy
Engineering Manager,
APPViewX
23rd Jan 2024 @ 9.30 AM to 10.30 AM
Mr. Sathish Subburaj
Application Development Manager,
Accenture Advanced Technology
Centers, India
24th Jan 2024 @ 11.00 AM to 12 PM
Dr. E. Edwin Lawrence
Executive Director, Merit Group
of Institutions, Tirunelveli
25th Jan 2024 @ 09.30 AM to 10.30 AM
CO-ORDINATORS
Mrs. T. Sasikala
Assistant Professor, CSA
Mrs. S.Rajakumari
Assistant Professor, CSA
CONVENOR
Dr. R.Latha
Professor & Head,
Department of CSA
SPIHER
+91 9445638065
www.spiher.ac.in
spiher.ac.in
@spiher.ac.in


Chennai, TN, India
Avadi, Chennai, 600071, TN, India
Lat 13.109913, Long 80.119643
01/23/2024 09:51 AM GMT+05:30
Note : Captured by GPS Map Camera

GPS Map Camera
Avadi, Tamil Nadu, India
4459+VQ8 ST. PETERS UNIVERSITY, Avadi, Tamil Nadu 600054, India
Lat 13.109969°
Long 80.119218°
24/01/24 11:24 AM GMT +05:30
Google

Achieving Problem–Solution Fit and Product–Market Fit

The Department of Computer Science and Applications, On 31st January 2024 organized a 90-minute offline session on "Achieving Problem–Solution Fit and Product–Market Fit" at the Mech Block Seminar Hall, under the guidance of Convenor Dr. R. Latha and coordinated by Dr. R. Subhashni and Mrs. S. Rajakumari. The resource person, **Mr. M. Sriraaman, Founder of IAMUSAP Ventures Pvt. Ltd.**, delivered an engaging and industry-focused talk emphasizing how startups can identify real customer pain points and design product features that meet market demands, ensuring innovation, sustainability, and user satisfaction. With **120 students** participating, the program enhanced entrepreneurial thinking and practical knowledge, empowering learners to transform ideas into viable solutions. This initiative effectively supported **SDG 4 – Quality Education** by equipping students with relevant skills, industry awareness, and innovation capabilities to excel in competitive and technology-driven markets.

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INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Deemed to be University U/S 3 of the UGC Act, 1956)
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INSTITUTION'S INNOVATION COUNCIL

NAAC A+

Department of Computer Science and Applications

in association with IIC

organizes

Seminar on

Achieving Problem- Solution Fit and Product - Market Fit

RESOURCE PERSON

Mr. M. Sriraaman
Founder,
IAMUSAP Ventures Pvt. Ltd.

31st January, 2024 | 10.00 AM to 11.30 AM | Mech Block, Seminar Hall

CONVENER

Dr. R. Latha, Professor & Head,
Department of Computer Science and Applications, SPIHER

COORDINATORS

Dr. R. Subhashni
Assoc.Professor, CSA

Mrs. S. Rajakumari
Asst. Professor, CSA

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Faculty Development Programme on
"FACILITATIVE TEACHING METHODOLOGIES" – 02nd MAR 2024

On March 2, 2024, at 9.00 a.m., Faculty Development Programme on " Facilitative Teaching Methodologies" by Department of Computer Science and Applications and IQAC in collaboration with CMSDI at our campus was a resounding success!. Dr. R. Latha, Professor and Head of the Department, welcomed the guest and spoke about our Institute, Department, and the understanding of and significance of AI and DS. Dr. S. Brindha, Associate Professor, and Mrs. J.A. Sophiya, Assistant Professor the faculty coordinators, introduced the guest as "Mr.Bernard George, Director, CMSDI & Mrs.Bhanumathi Cousik, Facilitator, CMSDI, Chennai." The guests demonstrate The facilitation methods included Action and Pair, Sketch noting process, Data Mining Process, Ambassadorial-Sharing, Gap Analysis on a Sticky Wall, ORID Framework. The '3-2-1 Process' brought our session to a triumphant close, surpassing all expectations More than 100 faculty members are Participated. The team of participants was outstanding, engaging in collaborative learning and demonstrating high-spirited teamwork. The National Anthem was played after the coordinator, Mrs. R.Vinotha, Assistant Professor, had given the vote of appreciation.

CMSDI
Fit For Work Fit For Life

"Facilitative Teaching Methodology"
02/03/2024

St. PETER'S

ATAL FDP onE merging Patterns in Cyber Security and Digital Forensics

11.11.2024 to 16.11.2024

The Faculty Development Program (FDP) on "Emerging Patterns in Cyber Security and Digital Forensics" was organized to provide an in-depth understanding of the latest trends, tools, and challenges in cybersecurity and digital forensics. The program was designed to benefit academicians, researchers, and industry professionals.

Objectives

- To introduce participants to cutting-edge developments in cyber security and digital forensics.
- To provide practical exposure to penetration testing, ethical hacking, and forensic investigation techniques.
- To foster industry-academic collaboration and enhance research capabilities in the domain.
- To discuss legal and compliance aspects of cybersecurity.

A **Faculty Development Programme (FDP) on Cyber Security and Digital Forensics** was conducted on **11th November 2024** at **St. Peter's Institute of Higher Education and Research, Avadi, Chennai – 600054, Tamil Nadu**. The event was organized by the **Department of Computer Science and Computer Applications** under the **AICTE-approved ATAL FDP program** to raise awareness about cyber security and digital forensic science.

The event began with a **welcome address by Dr. R. Latha, Professor & Head, Department of Computer Applications.**

The FDP was **inaugurated by Vice Chancellor Dr. N. Malmurugan**, who emphasized the **importance of cyber security and digital forensics in safeguarding individuals and organizations**. He also highlighted the need for **security measures in various industries and educational institutions** to protect digital assets and ensure a safe technological environment. Additionally, he appreciated the participation of **representatives from multiple engineering colleges** and other Institutions in the seminar.

The FDP was felicited by **Registrar L. Mahesh Kumar** and **IQAC Director Dr. R. Rani Hemamalini**.

Mr.N. Jagadeesh, Assistant Professor from the **Department of Computer Applications** provided an overview of the participating experts and their contributions.

The **Inaugural address** was delivered by **Mr.J.. Vamsidhar, Founder and CEO of Cyber Code**, who emphasized the **need for introducing various cyber security tools** to protect different industries from cyber threats.

During the FDP, discussions were held on **the challenges in cyber security and the solutions to address them**. The rising incidents of **cybercrime in the country** were also analyzed.

A **panel discussion on mobile cyber security** with the participation of **50 representatives from various colleges**, who shared insights on how **cyber security and digital forensics can benefit the industry**.

The event concluded with a **vote of thanks delivered by Dr. S. Brindha, Head of the Department of Computer Science**.

Engineers Day 2024 – Engineering Solutions for a Sustainable World

Department of Electronics and communication Engineering on 10th September 2024, the Department organized a half-day offline event titled **"Engineers Day 2024 – Engineering Solutions for a Sustainable World"** to celebrate the significant role of engineers in addressing global sustainability challenges and advancing innovative solutions. The program focused on key themes such as **IPR and Technology Transfer, Innovation and Design Thinking, Entrepreneurship and Start-up Development, and Pre-Incubation and Incubation Management**, offering students valuable exposure to modern engineering practices. The session featured distinguished speakers including **Dr. J. Balamurugan, FIE EL, Chairman, Dr. M.G.R. Educational and Research Institute**, **Mr. T. Arivuraja, Managing Director, MAPe IT Solution Pvt. Ltd.**, and **Dr. V. Cyril Raj, MIE ET, Honorary Secretary, IEI-TVLC**, who shared expert insights on creating sustainable engineering solutions that contribute to environmental responsibility and societal well-being. With **75 students** and **25 faculty members** participating, the event motivated the academic community to adopt sustainability-focused engineering practices and highlighted the importance of innovation for a better future. This initiative strongly supported **SDG 4 – Quality Education** by fostering technical learning,

creativity, and real-world problem-solving skills among future engineers.

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LinkedIn Link:
https://www.linkedin.com/posts/spiherchennai_engineersday2024-sustainableengineering-ieitvlc-activity-7239909770873167872-_Lfn?utm_source=share&utm_medium=member_android

ENGINEERS DAY 2024

ENGINEERS DAY 2024
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4459 QXF, Annanur Rd, Avadi, Tamil Nadu 600077, India
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Workshop on "Exploring an array of bio-careers with Lab demonstration on Gene Mining"

International Workshop on **"Exploring an array of bio-careers with Lab demonstration on Gene Mining"** was conducted on 11th September 2024 at EEE block Seminar Hall. The function commenced with a prayer song and followed by a welcome address by Dr. K. Amala - Head, Department of Biotechnology. Dr. S Chandra, Professor- Department of Biotechnology introduced the speaker,**Dr. Prem kumar Albert, Visiting Scientist,** Spanish National Research Council (CSIC), Instituto de Recursos Naturales y Agrobiologia (IRNAS), Plant Biotechnology Department, Sevilla, Spain. to all the participant. The Guest speaker honoured with Momento by Major. Dr. M. Venkataraman - Dean FASCMH SPIHER. The speaker delivered an excellent talk on genomes and genomic sequence of an organism and types of genomes, nucleotide sequence of genes and amino acid sequence, Detection and annotation of biosynthetic gene clusters from genomic data.

Followed by Lab demonstration on gene mining in **Arabidopsis thaliana** to the students. Students were actively participated and gained knowledge on genome organisation and gene sequencing methods. Interactive session was arranged at the end of the session. Many of them raised their questions and they were answered by the speaker Dr. Prem kumar Albert. Finally students are attended lab oriented activities and win prize from the speaker. Ms. P. Yogarajalakshmi –Asst. Prof, Department of Biotechnology has delivered the vote of the thanks at the end of session. Especially she thanked the speaker for his extraordinary talk and she thank all the participants for their active listening and participation. Feedback was collected with good comments. The program was attended by **65** participants.

Programme outcomes: The students gained knowledge on types of genomes and its genomic sequence and Arabidopsis thaliana gene mining

Media Link :https://www.facebook.com/share/p/dbepPMehvSy9uADi/

https://www.instagram.com/p/C_xGolnvDPe/?igsh=cnYxN3l5NTc0eGEx

Guest Lecture on "AI for Scientific Discovery in Physics"

The **Guest Lecture on "AI for Scientific Discovery in Physics"** was organised by the Department of Physics on 6th August 2024 in the august presence of Honourable Dean-FASCMH Maj. Dr. M. Venkatramanan. The welcome address was given by Dr. S. Stella Mary, Convenor of the guest lecture, Professor and Head, Department of Physics, SPIHER. Dr. R. Surekha, Deputy Dean, Agurchand Manmull Jain College, Meenambakkam, Chennai delivered an insightful talk on the importance of Artificial Intelligence (AI) in the various fields of Physics. The session went on well with an interaction by students with the speaker and the Vote of Thanks was delivered by Dr. S. Gomathi, Co-ordinator of the lecture, Associate Professor, Department of Physics, SPIHER.

CERTIFICATE COURSE ON DATA ANALYTICS
(CSR Initiative of ICT Academy in Association with Paypal)

The Certificate Course on Data Analytics was designed to provide participants with foundational knowledge and practical skills in the field of data analytics. The course spanned over a period of 140 hours and was conducted by SPIHER from 22/02/2024 to 22/03/2024. It aimed to equip participants with essential tools and techniques to analyze data effectively and derive meaningful insights.

COURSE OBJECTIVES:

- To introduce participants to the fundamentals of data analytics.
- To familiarize participants with statistical analysis techniques.
- To teach participants how to use data visualization tools to communicate insights.
- To provide hands-on experience with popular data analytics software and programming languages.

ABOUT THE COURSE

A certificate course in Data Analytics provides a comprehensive foundation in the principles, techniques, and tools used to interpret data for actionable insights. Covering essential topics like data cleaning, statistical analysis, data visualization, and machine learning, the course is designed for individuals seeking to understand how data can drive decision-making in various sectors, including business, finance, healthcare, and technology. Participants typically learn to work with popular analytics platform Microsoft Power BI for Data Analytics which is a powerful tool that enables users to analyze and visualize data in an interactive, user-friendly environment. Designed for both beginners and seasoned data professionals, Power BI offers a suite of business intelligence tools that make it easy to import, clean, model, and visualize data from a variety of sources, including Excel, SQL databases, and cloud services. Users can create detailed dashboards and reports, providing insights at a glance and allowing for deep dives into specific metrics. The platform’s sharing and collaboration features further enhance its utility, enabling teams to work together on reports and gain collective insights that can guide strategic planning.such as Python, R, SQL, and Tableau, and gain hands-on experience through practical projects and case studies. By the end of the course, students are equipped with the skills needed to analyze complex data sets, interpret trends, and communicate their findings effectively, making them valuable assets in today's data-driven world. This certificate also offers a competitive edge in the job market, as data analytics skills are in high demand across industries.

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ICTACADEMY
Internal Quality Assurance Cell
In association with ICT Academy
Cordially invite you to the inauguration of
Student Enablement Program
PayPal
Center of Excellence for
YOUTH EMPOWERMENT
(An Initiative of PayPal) on
12th March 2024 | 9.30 am
Main Block Seminar Hall
INAUGURAL ADDRESS BY
Dr. P. Dananjayan
Vice Chancellor
CHIEF GUEST ADDRESS BY
Mr. V. Poorna Prakash
(State Head- ICT Academy, Tamil Nadu)
FELICITATION ADDRESS BY
Dr. L. Mahesh Kumar
Registrar
Dr. V. Subbiah Bharathi
Director
Dr. E. N. Ganesh
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YOUTH
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Awareness Session on "Career Guidance and Online Education

The Department of Computer Science and Applications of St. Peter's Institute of Higher Education and Research conducted Awareness Session on "Career Guidance and Online Education". Mrs.Sheeba, Assistant Professor coordinated the event, Dr.R.Latha, Professor Head of the Department welcomed the gathering, and the session was handled by the Mr.G.Sandeep Kumar, Associate Vice President-Alliances rendered the session with entrepreneurship, Stock markets, Personality Development, Career Counselling, Skill Development and more.

Mapping to 2024 Publications- SDG 4

S. No.	Title of the Publication	Authors	Justification (How it contributes to SDG 4 – Quality Education)	SDG
1	Evaluating a Virtual Clothing Design System Based on Web Technology	Shiru Shao, B. S. Suresh	Promotes digital and interactive learning in fashion technology; building modern design and ICT skills.	4.4
2	Navigating the Digital Maze: Enhancing Employee Motivation and Work-Life Balance in Chennai's IT Industry	Esther Martina, B. N. Suresh Kumar	Supports HR and management learning; improves understanding of work culture and professional skills.	4.4
3	Examining Work Quality, Workplace Stress, and Their Impact on Employee Well-Being in the IT Industry	Esther Martina, B. N. Suresh Kumar	Enhances academic curriculum in organizational behavior and sustainable work practices.	4.7
4	On the Development of Big Data Intelligent Module Vocabulary System	Zhenyu Yan, He Yang, Qianqian Su, G. P. Ramesh	Improves digital language learning using big data-driven tools; increases educational effectiveness.	4.1, 4.4
5	Cloud-Based Database Construction in Language Subject	Zhenyu Yan, He Yang, Yu Xi, G. P. Ramesh	Upgrades language learning infrastructure with scalable cloud-based resources.	4.a
6	Effective Identification and Authentication of Healthcare IoT Using Fog Computing with Hybrid Cryptographic Algorithm	Britto Corthis, G. P. Ramesh	Develops advanced computing and cybersecurity skills critical for ICT-based careers.	4.4
7	Framework for Real-Time Recognition and Detection of Human Faces in CCTV Images	D. Gayathry, Latha Ramavel	Enhances learning in AI and computer vision; supports engineering skill development.	4.4
8	Real-Time Face Recognition System using Python and OpenCV	D. Gayathry, Latha Ramavel	Provides hands-on experience in coding and machine learning for practical skill enhancement.	4.4
9	Remote Monitoring & Analytics for Cloud-Based Drip Saline Fluid Management System	G. Sudha et al., E. N. Ganesh	Promotes interdisciplinary STEM learning; accessibility to healthcare technology knowledge.	4.4, 4.5

10	Network Intrusion Detection System Using Ensemble Model for Smart Home	E. N. Ganesh et al.	Strengthens cybersecurity education aligned with real-world industry needs.	4.4
11	Detection of Alzheimer's Disease using Otsu Thresholding and Deep Learning	Praveena Ganesan, Ramesh G. P.	Supports applied AI and biomedical education for human wellbeing and career readiness.	4.7, 4.4

Mapping to 2024 Book Chapters - SDG 4

Sl. No	Faculty	Title of Book Chapter	Department	Publisher	SDG(s)	Justification
12	Ms. A. Chitra	**Assistive Technologies for Hard of Hearing & Mutant Students in Higher Education**	Computer Applications	Taylor & Francis	SDG 4 (Quality Education), SDG 10 (Reduced Inequalities)	Promotes inclusive education.
14	Dr. A. Loganathan	**AI in Agriculture Sector**	Economics	Indian Economic Association	SDG 2 (Zero Hunger), SDG 9	AI improves agricultural productivity and sustainability.