BEST PRACTICE 1:

TITLE OF THE PRACTICE**: INNOVATION ECOSYSTEM**

OBJECTIVES: Innovation Eco System of St. Peter's Institute of Higher Education and Research (SPIHER) acts as the driver of innovation. The main objective of the system is to promote creativity and innovation among students and teachers, and facilitate development of innovative systems, processes, products, technologies and services for the benefit of the society. It serves to connect all the stakeholders of innovation including UG and PG students, researchers, teachers, entrepreneurs, business development and other technical service providers, providers of skills training and professional development, and IPR support.

CONTEXT: The Institute started to realize the necessity for the University teachers and students to evolve with innovative ideas in research and other academically enriching activities. The ***Centre for Innovation*** was started in 2017 with the objective of motivating students and teachers on innovation and improvement of quality research and publications. Motivational lectures are arranged for this purpose. Incentive to faculty for best project with maximum grant; Incentive to faculty for high quality publication with maximum impact factor; Incentive for faculty filing patent by reimbursing cost of filing and publishing; and Students' Project Exhibition and award of certificates and cash prizes for best projects are given every year.

THE PRACTICE: SPIHER strives to encourage and create Research culture conducts various workshops, challenges, hackathons, innovation competitions, projects, and publications.

A team of dynamic minds from the galaxy of teachers and students had to be identified to promote a productive as well as proactive outcome in the innovative pursuits of the institution. Creative and unique academic pursuits had to be addressed by setting up a council of such intuitive minds. The ***Institution Innovation Council*** **(IIC)** started in 2018 at the initiative of the Innovation Cell of the Ministry of Human Resource Development, Government of India. The Council includes members from students, teachers, industry and Patent expert. A number of activities are conducted through this Council to motivate and promote creativity and innovation among students and teachers viz., Webinars by Industry Leaders, Workshops on IPR, Workshops on entreprneurship and innovation, Hackathons for

students, Innovation chellange and business plan competition, and Field visit to incubation centre.

The practice of Innovation Ecosystem has exclusively given birth to various Innovation wings in SPIHER like the Centre for Innovation, Technology Business Incubator, and the SPIHER-MSME Business Incubator. The Technology Business Incubator was started in 2009 with approval of the Department of Science and Technology, Government of India, with a grant of Rs. 2.00 crores. Besides incubation activities, the incubator conducts several technical pogrammes like awareness camps, technology based entrepreneurship development programmes and Faculty development programmes every year with funding by Entrepreneurship Development Institute of India.

SPIHER – MSME Business Incubator was started in 2009 with the approval of the Ministry of Micro, Small and medium Entreprises, Government of India. The incubator promotes emerging technological and knowledge-based innovative ventures. The scheme was enlarged with provision for seed capital for startups and our incubator was approved under the new scheme in 2019. The activities of the incubator include: Guidance for grant-in-aid for technology development; Guidance for seed capital for startup; Mentoring support; Technical guidance through mentor; R&D support, testing where required; Linking with other R&D labs, industry where required; Guidance for IPR; Guidance for technology transfer; and Training programmes and skill development.

The incubator promotes ideas in technology domains like Manufacturing industry, Electronics & Communication, IoT , Energy and Environment, Construction, and Health care.

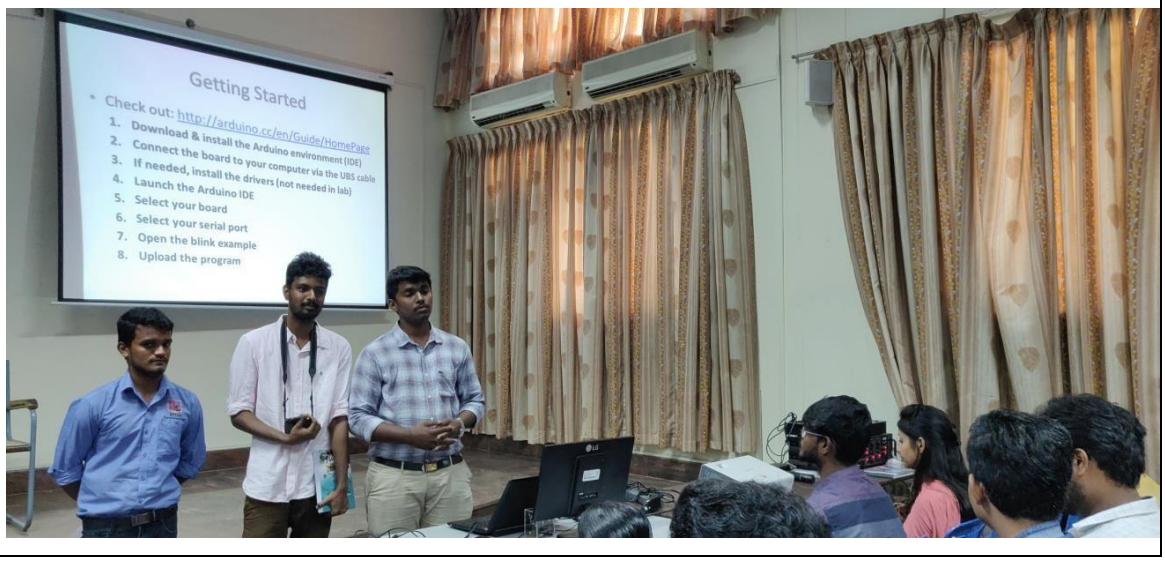
EVIDENCE OF SUCCESS: Ten technologies have so far been developed for commercialisation through SPIHER – MSME Business Incubator. Four patents have been filed. The non-invasive device for measuring sugar level has won the first prize at the International Exhibition organised by AIEMA on Machine Tools during June 2018 at Chennai Trade Centre.

The innovation eco system has contributed potentially for innovation performance of the institute. Totally 31 patents have been filed out of which two have been granted and the remaining are under various stages of process. Ten technologies

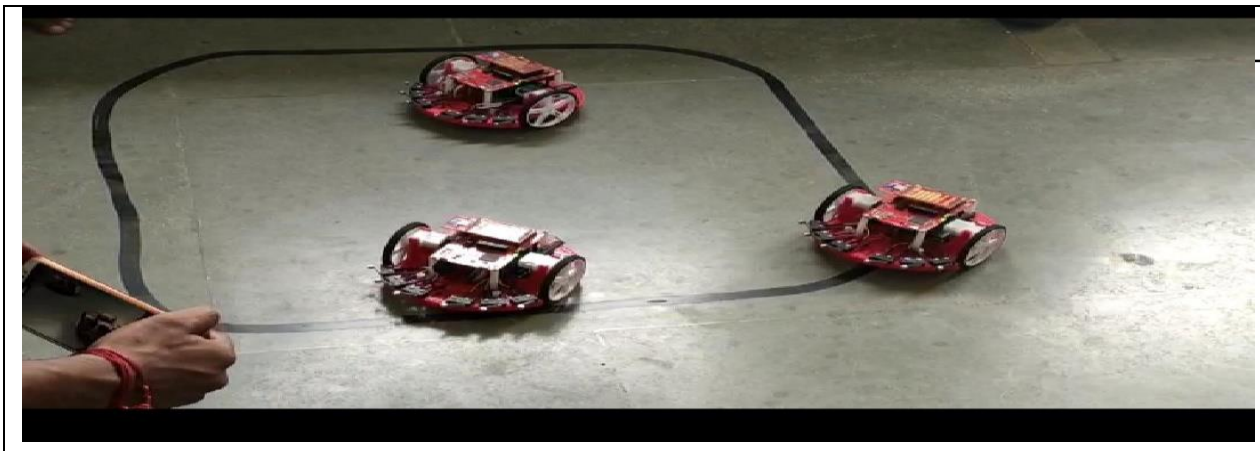
have been successsfully developed. Ten ideas have been applied for grant and seed capital under Ideas for New India 2020 of Ministry of MSME, Government of India. The Institution Innovation Council has been awarded 3 stars by MHRD IC for performance during 2018-19. Four teachers have been trained as ambassadors in product design, product development, IPR and entrepreneurship. All these have helped in promoting innovation and ideas for technology development for commercialisation.

PROBLEMS ENCOUNTERED AND RESOURCES REQUIRED: A multitude of technologies were developed through the influence of the Innovation Ecosystem in the institution. The faculty came up with a list of innovative technologies like making Plastic device with acetone sensor, Wearable device for geriartric care, Geopolymer concrete bricks, Solar powered electric vehicle for in-campus transportation, Fuel activator, Device for active assist rehabilitation of elbow and wrist joint, and Grid-tie solar PV system. The Institution Innoavtion Council along with help the help of MHRD and the constant back up from SPIHER had to arrange interactive meets and constructive platforms for the aforementioned innovations. Students and teachers had to be constantly motivated to accomplish more innovaiev ideas through IIC and also to enjoy the benefits of being financially supported by the institution for their innovations.

Two days National level Hands-on Workshop on 3D Printer and CNC Machine Design in association with Indian Institute of Information Technology, Design and Manufacturing(IIITDM)



CErtificate Course on STAAD Pro



5 days Training Program on Robotic (RSLK)

6 Days Course on 5G Technology

Augumented reality and Virtual reality' by Image

Trends in Electrical Engineering:Smart Grid and Electric Vehicles

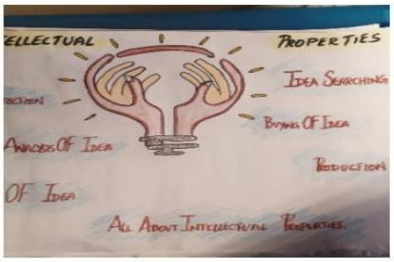
Recent trend inIndustrial Automation

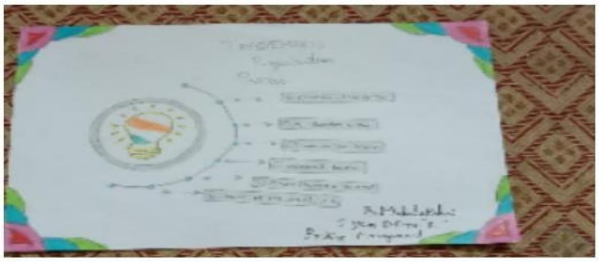
Online Internship program on Deep Reinforcement Learning using Python

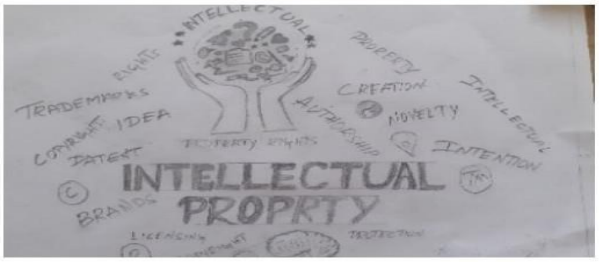
AGENDA

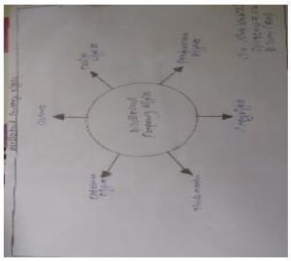
30.03.2020-	Introduction to Python 3 and libraries(NumPy, Scikitlearn, Pandas, Matplot) for Machine learning and Deep Learning. **Mr. N. Komal Kumar**
31.03.2020-	Introduction to Regression algorithms **Dr. S . Pushpa**
01.04.2020-	Introduction to Clustering algorithms **Ms. A.Helen & Ms. M. Grace Prasana**
02.04.2020-	Classification Algorithms (Supervised) **Mr. N. Komal Kumar**
03.04.2020-	Regression algorithms **Dr. S. Pushpa**
04.04.2020-	Clustering algorithms **Ms. A.Helen & Ms. M. Grace Prasana**
05.04.2020-	Classification algorithms **Mr. N. Komal Kumar**
06.04.2020-	Regression algorithms **Dr. S. Pushpa**
07.04.2020-	Clustering algorithms **Ms. A.Helen & Ms. M. Grace Prasana**
08.04.2020-	Deep Learning and Reinforcement Learning (Introduction to Keras and Tensorflow), Practice with real time Dataset. **Mr. N. Komal Kumar**

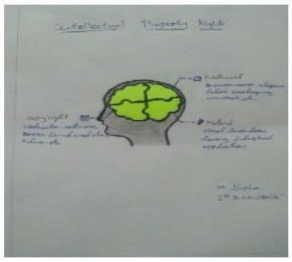
INTERNATIONAL INTELLECTUAL PROPERTY DAY
POSTER COMPETITION

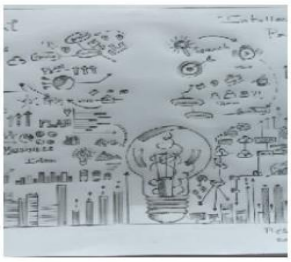


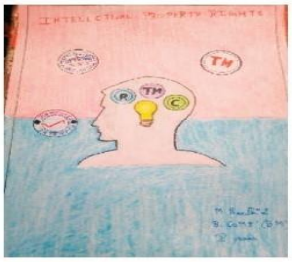












One Week Online InternshipOn UNDERSTANDING PHYSICS IN HUMANBODY

New trends in solar energy applications Smart Grid, Electric vehicles

Smart MEMS and Sensor System

ITOT Integration and Data Analytics

BEST PRACTICE 2:

TITLE OF THE PRACTICE: **OUTREACH PROGRAMMES**

OBJECTIVES: St. Peter's Institute of Higher Education and Research aims at serving humanity in times of need and also in times of crisis. Hence, as per the motives of the International Red Cross Society, the institution comes together with its resources to construct a friendship with the society.

The NSS/YRC cell of SPIHER organizes relief and assistance without discrimination to the victims of various disasters. The students are trained by the NSS/YRC staff to identify and alleviate human sufferings, to be socially responsible and vigilant, and to ensure respect and dignity for human beings. The basic principles of this practice include: humanity, distinction, proportionality, and prevention of Universal suffering.

CONTEXT: As per the objectives of NSS/YRC an understanding of civic responsibility was identified in aspiring students. A sense of duty and dedication was imbibed in them by the NSS/YRC staff of SPIHER.

It was a challenge for the management to identify such responsible dedicated minds. Hence the University gathered volunteers who would contribute to the

cause of such noble objectives. The NSS/YRC cell organized various outreach initiatives with the co-operation of the NSS/YRC Joint District organizers. The Institute strives to raise the capacity of healthcare, safety, and mobilizing the normal life of the vulnerable. An inbuilt advocacy of tolerance and co-existence in the communities is inculcated in the students. The underlying principles of the practice are implemented through various campaigns and rallies so as reach the needs of the vulnerable.

THE PRACTICE: The Higher Education policy of India definitely heeds to the voices of the vulnerable. The vision of this practice is to make the students healthy in both academic and non-academic perspectives. After graduation a student of SPIHER is not only identified as an efficient scholar but also as an all-rounder in becoming a responsible citizen of India.

A few villages have been adopted by SPIHER for delivering these outreach programmes. The NSS/YRC cell ensures health and life to the nearby communities and in the adopted villages; it provides service the sick and suffering; and an involvement of the mental and moral capacities of the students in such activities are promoted. The dynamic, devoted, and service-minded faculty members of SPIHER, who are appointed as the Zonal-coordinators of the NSS/YRC cell, take up the responsibility of sensitizing, inducing, and encouraging the young minds to participate in the University zone activities. These selfless, service-minded NSS/YRC volunteers are identified and nominated as office bearers by the University Heads with the joint ocntributionof the District organizers.

These volunteers are then steered to perfection by involving them in awareness programmes to people on personal hygiene through campaigns, rallies, skits, mimes, etc. With the the help of the state parent body SPIHER also conducts medical check-up at slums, and adopted villages. SPIHER has also been instrumental for the Public Health Department in imparting ground level works such as anti-epidemic measures, village sanitation, etc. Cultural programmes and events like exhibiting awareness films and conducting essay competitions for students help them realize the intensity of such emergency situations in a creative manner.

Inside the premises the students are made to practise healthy habits like keeping the campus as well as public places clean, practicing healthy sanitation habits at home, planting saplings inside and outside the campus, using pollutant free fuels for their vehicles, helping the persons at distress, rendering first aid to people in trauma, and many such healthy habits which is made a practice for them. These efforts taken by SPIHER in nurturing the students for being ready for all kind of civic responsibilities, not only meets the aims of NSS/YRC but also makes them a perfect citizens of Inida. Their higher education purpose is doubled with an awareness and consciousness for the society, which in turn makes the alumni of SPIHER as the most responsible citizens, through such outreach programmes.

EVIDENCE OF SUCCESS: As part of setting an example to the student community and to the society, SPIHER encourages the admission of physically challenged youth who can gain success from the Institution. The other students learn to blend with them and help them in times of need. Even the architecture of the University is friendly in this concern. Elevators, equipped lavatories, comfortable classroom amenities help the physically challenged students gain a comfortable ambience in the campus. So far many physically challenged students have successfully completed their graduation in SPIHER. Apart from that these outreach programmes also target every year to organize and have accomplished the same: NSS/YRC traing camps, non-formal adult education, sewing and handicraft training programmes, rainwater harvest in adopted villages, cleaning and de-weeding tanks or ponds with the help of local people, small saving and co-operatives drive, awareness for the development of dairy, poultry, fishery, apiculture, mushroom cultivation, etc. Days of national and international importance are also observed like: International Day of Peace, Vigilance awarenss weeks, National Unity day, Fit India Movement, International Literacy day, and Swacchhta hi seva.

PROBLEMS ENCOUNTERED AND RESOURCES REQUIRED: In order to supply services like offering medicines to the poor, taking students through transport to camps and their staying expenses, providing garments to the needy, providing hospital services, rice and fruits for the sick and needy, and organizing free eye camps and blood donation camps, SPIHER has generously spent money to regulate all necessities for the NSS/YRC cell. The Institution feels equally responsible towards community engagement programmes like NSS/YRC. Hence,

without any hindrance the students are allowed to enjoy the freedom of participating and forerunning socially effective campaigns and rallies through such outreach rpogrammes. Thus, SPIHER has provided all such resources that are needed for social services and has equally met with challenges that had shaped the Institute's legacy of commitment and responsibility.

NOTES: The NSS/YRC cell of SPIHER has implemented various outreach programs that stand unique and inspirational to other institutions like: Awareness programme on "Beat Plastic Pollution", "Clean India" campaign and planting tree saplings through Swacch Bharat Abhyayan, Disaster Management Measures taken to rescue the needy, maintain an eco-friendly campus as an effect of various rallies on the same, creating awareness on healthy living through Yoga, and in implementing reverse osmosis, solar panels to generate electricity, and rain water harvesting projects inside the campus. The NSS/YRC cell has also offered the help of plumbing in select villages, conducted fire safety demonstrations and computer literacy in schools, awareness programs for rural women on effects of chronic diseases, distribution of formula books in schools, lectures on Unnat Bharat Abhiyan, and creating awareness on dengue and chikungunya. NSS special camps, Gender equality awareness programmes, educating underprivileged children, computer training course for police constables, awareness on voting rights and the usage of the Kaavalan app are the added exclusive outreach programmes that are unique to SPIHER and have a major on the forefront of higher educational institutions and on the society.

Awareness Program on Fire Safety for School Students

Plumbing for the Village People

Annual Exhibition of Studio Works

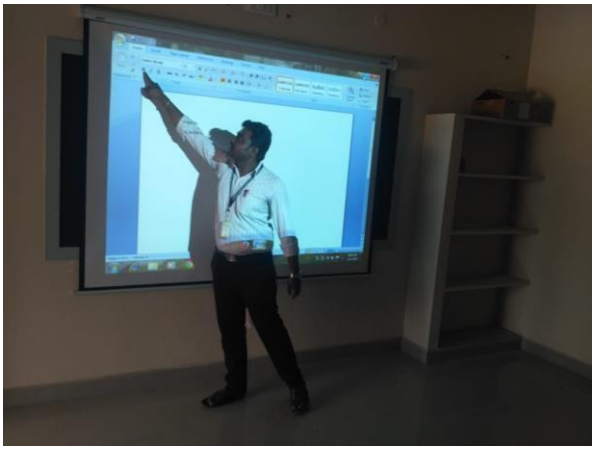
Taking Poshyan Abhiyan Pledge

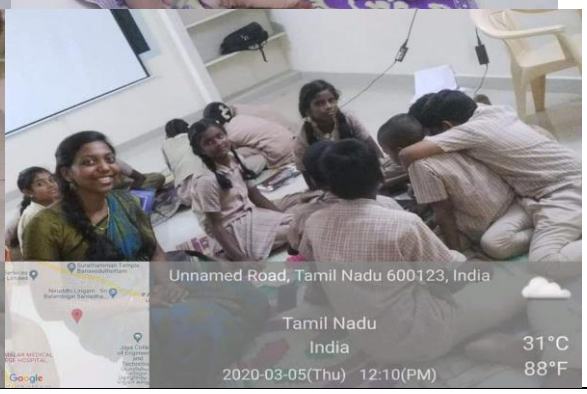
Dengue Awareness Programme

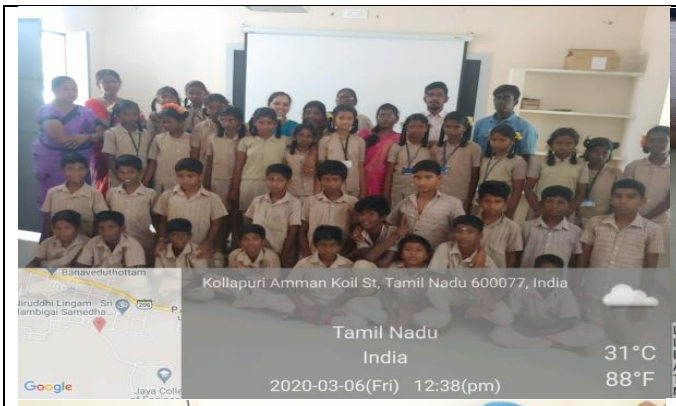
International Literacy Day

International Day of Peace

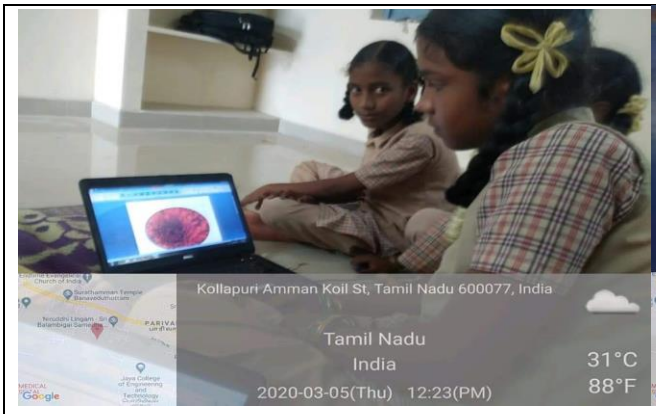
Computer Literacy Program as Extension Activity at ParivakkamGovernment High School

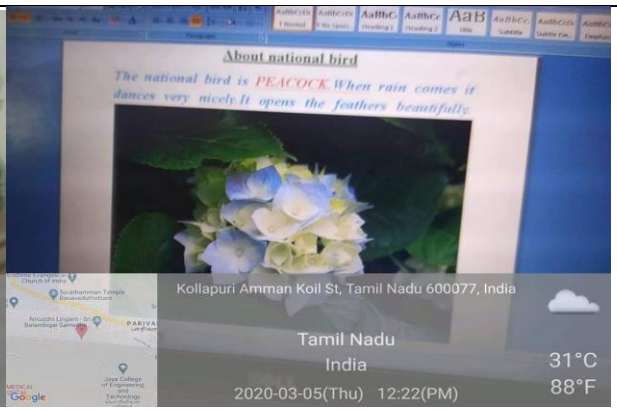






Student Volunteers


Kollapuri Amman Koil St, Tamil Nadu 600077, India
Tamil Nadu
India
2020-03-05(Thu) 12:23(PM)
31°C
88°F


About national bird
The national bird is PEACOCK.When rain comes it dances very nicely.It opens the feathers beautifully.
Kollapuri Amman Koil St, Tamil Nadu 600077, India
Tamil Nadu
India
2020-03-05(Thu) 12:22(PM)
31°C
88°F