**Innovative projects and teamwork:** Students are encouraged to take up innovative projects in different fields of their interest and teachers play a very important role in accomplishing these. Under the supervision of faculty members students voluntarily work for various interdisciplinary projects and actively participate in design contests conducted by industry leaders. Patent details of the faculties and students during the assessment years are shown below.

Sl. No	Name of the faculty	Торіс	Application No.	status	Date of published
1	D M Srinivasa	A Novel Design of UV Disinfection Robot	202241046175 A	Published	26/08/2022
2	D M Srinivasa Srinath M S Gaana H	Water surface cleaning boat using IOT	202341016402 A	Published	17/0./2023
2	Srinath M S	Certificate authentication system with block chain technology	202341016404 A	Published	17/03/2023
3	Anusha M K	An AI enabled solar panel rotation system	202341016403 A	Published	17/03/2023
4	Gaana H	Predicting child mental stress using AI	202341016400 A	Published	17/03/2023

Table 4.6(a)

(12) PATENT APPLICATION PUBLICATION (19) INDIA

## (21) Application No.202241046175 A

(22) Date of filing of Application :12/08/2022

(43) Publication Date : 26/08/2022

(54) Title of the invention : A NOVEL DESIGN OF UV DISINFECTON ROBOT

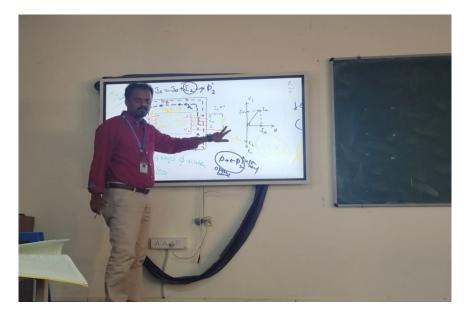
<ul> <li>(31) International classification</li> <li>(86) International Application No Filing Date</li> <li>(87) International Publication No</li> <li>(61) Patent of Addition to Application Number Filing Date</li> <li>(62) Divisional to Application Number</li> </ul>	:A61L0002100000, C07K0016100000, A01N0037020000, B82Y0005000000, A61L0002180000 :PCT// :I/01/1900 : NA :NA :NA :NA :NA	<ul> <li>(71)Name of Applicant :</li> <li>1)PES College of Engineering Address of Applicant : PES College Road, Mandya-571401 Mandya</li></ul>

## (57) Abstract :

The UV 222nm robot is the most effective in terms of killing germs and viruses. Contact, droplet, aerosol, fomite, faecal-oral blood borne, and animal to human transmission are all ways of virus and bacteria transmission. UV222nm light is utilised to cleanse the virus, and it is used to disconnect this form of transmission. In the past, we used procedures such as cleaning with water and soap or a detergent, sanitizing, and other similar ways to disinfect the virus. It is costly to employ all of these methods, and they will need to be replaced after they are exhausted. However, the UV 222nm is a one-time purchase with a lengthy lifespan. As a result of employing UV222nm, fewer herbicides are used. It will destroy viruses and bacteria, require less time to eliminate pathogens such as viruses and bacteria, and be used in agriculture, medicine, food processing, and industrial processes. The virus will be propagated in public places by coughing, sneezing, speaking, and breathing; the infection will be spread through all of these methods. Because no one can wash their hands all the time in a public location, the virus can be disinfect the virus. UY 222nm in all public spaces such as hospitals, bus stops, shopping malls, and other places where we may install UV 222nm to disinfect the virus. Ur adiation with a wavelength of 222nm will eliminate all viruses and bacteria without affecting humans or the environment. The current work of the UV Robot is aimed at finding answers to problems that arise in arage of disciplines, including medicine, agriculture, food processing, commercial and industrial industries, and so on. Sanitizing public areas is necessary in order to prevent the spread of and the germs are eradicated using UV light at a wavelength of 222 nm. One of the current research aims is to eradicate pathogens such as viruses and bacteria. Different viruses, bacteria, and fungus may be eradicated with UV technology. Viruses, fungi, and bacteria are all examples of pathogens.

No. of Pages : 19 No. of Claims : 2

• Smart Board: The institution provides the smart Board for teaching. It makes learning better by interactive lessons, web access and allows students to collaborate with each other.



• YouTube Channel: The department has its own youtube channel (EEE PESCE), where the faculties will upload the videos related to the curriculum courses and thereby the students will make use of these videos for their academics.

https://www.youtube.com/@eeepesce4444 https://www.youtube.com/@EEEPESCEMandya

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## **Pedagogical Initiatives :**

- 1. The EEE department has realized importance of Pedagogy Training for their faculty members and thus encourages them to undergo training organized by various colleges and institutes either by online or offline mode.
- 2. Generally faculties are encouraged to attend training which provides an insight into the modern teaching processes and thereby the teacher can be more effective in terms of teaching learning process.
- 3. The faculty members attend pedagogy training organized both by our institution and other institutions as well (Example: GTDC).
- The faculties are advised to enroll for NPTEL courses on recent & emerging trends. Fig shows faculty certification in ICT/NPTEL Training

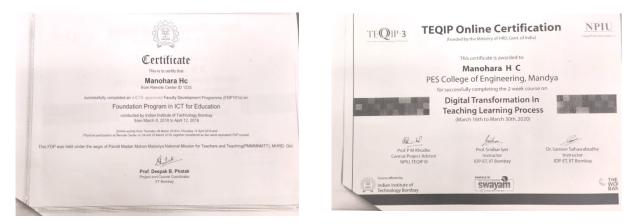


Fig: 4.6 (b) Foundation Program in ICT for Education certificate & Digital Transformation in Teaching Learning Process certificate of one of our faculties.



Fig: 4.6<sup>©</sup>: NPTEL-AICTE FDP online certificate of our faculties.

Faculty members use various pedagogical methods for the effective teaching-learning process. The Department has taken the following pedagogical initiatives:

i) Chalk & Board: The conventional and most effective instructional method is the chalk & board and the faculty commonly use this traditional method.

**ii) Project-based learning (PBL):** Project-based learning is an innovative practice used to implement outcome-based education at our institute. Students are encouraged to carry out multidisciplinary projects to gain engineering knowledge through mini projects.

iii) Industrial visits- Field visits are organized regularly to support curriculum delivery.

iv) Case studies: Case study approaches are used which provide students an application of engineering knowledge.