



**Mahatma Education Society's
Pillai College of Education & Research**
Plot-1, Sector-8, Khanda Colony, New Panvel (W)-410206

Criterion no. 4.3.4

Link to the e-content developed by the faculty of the institution –
[Self Study Course | Pillai College of Education and Research \(pcerpanvel.ac.in\)](http://pcerpanvel.ac.in)

Link to videos of the e-content development facilities –
[E-Studio Facilities | Pillai College of Education and Research \(pcerpanvel.ac.in\)](http://pcerpanvel.ac.in)






**Mahatma Education Society's
Pillai College of Education & Research**

Plot-1, Sector-8, Khanda Colony, New Panvel (W)-410206

METRICS No. 4.3.4

**Letter of Sharing of e-studio facilities
& Equipment in the e-studio**


Dr. (Ms.) Sally Enos
PRINCIPAL
MAHATMA EDUCATION SOCIETY'S
Pillai College of Education & Research
Dr Pillai Teacher Training & Research Centre
Plot No 1, Sector-8, Khanda Colony,
New Panvel-410 206.



Inst. Code:
EN3207 | ME3207

MAHATMA EDUCATION SOCIETY'S

PILLAI COLLEGE OF ENGINEERING

Approved by AICTE, DTE, Government of Maharashtra and Affiliated to University of Mumbai
(Re-Accredited by National Board of Accreditation)



Dr. K.M. Vasudevan Pillai Campus, Sector 16, New Panvel, Navi Mumbai - 410206. Maharashtra India
Tel: 27451700 / 6100 / 2745 6030 / 2748 3207. Fax: 2748 3208. Website: www.pce.ac.in, e-mail: principalpce@mes.ac.in

Ref. No.: PCE/1504(A)/2017-18

Date: 12th February 2018

The Principal
Pillai College of Education and Research
New Panvel

Madam,

As per, your letter dated 12th February 2018, for permission to avail of the e-studio facilities, MES' Pillai College of Engineering is happy to share the e-studio resources and facilities at the Dr. K. M. Vasudevan Pillai Campus, Panvel with MES' Pillai College of Education and Research, New Panvel for educational purposes. Your staff and students may use the facilities for the development of e-content.

Thank You,

Yours Faithfully,

Dr. Sandeep M. Joshi
Principal

PRINCIPAL
MAHATMA EDUCATION SOCIETY'S
PILLAI COLLEGE OF ENGINEERING
Dr. K. M. Vasudevan Pillai's Campus, Sector-16,
New Panvel - 410206, Navi Mumbai,
Maharashtra, INDIA.

E-content Development

Mahatma Education Society's Pillai College of Engineering provides small group training and one-on-one consultation to help faculty learn to build appealing online courses, develop engaging online teaching methods and to find or create appropriate media and course materials to encourage student engagement and success. The e-Learning studio assists faculty in the effective use of technologies for creating visually dynamic video lectures to push the boundaries of teaching innovation and student in-class expectations to enhance teaching and learning.

In an endeavour to provide the best to the students, Pillai College of Education & Research has initiated video lecturing on various topics. The students can watch video lectures at their own convenience. Needless to say, video in particular is often attractive as a means to capture lecture content and present direct instruction. Of all the technological components involved in the learning experience, it is often the most visible and the most resource intensive. It is easy then to assume that it will be the most impactful. Our focus is on the good design and effective delivery of web-enhanced, blended/hybrid and online courses.



E-Studio setup

Facilities available in e-Learning Studio

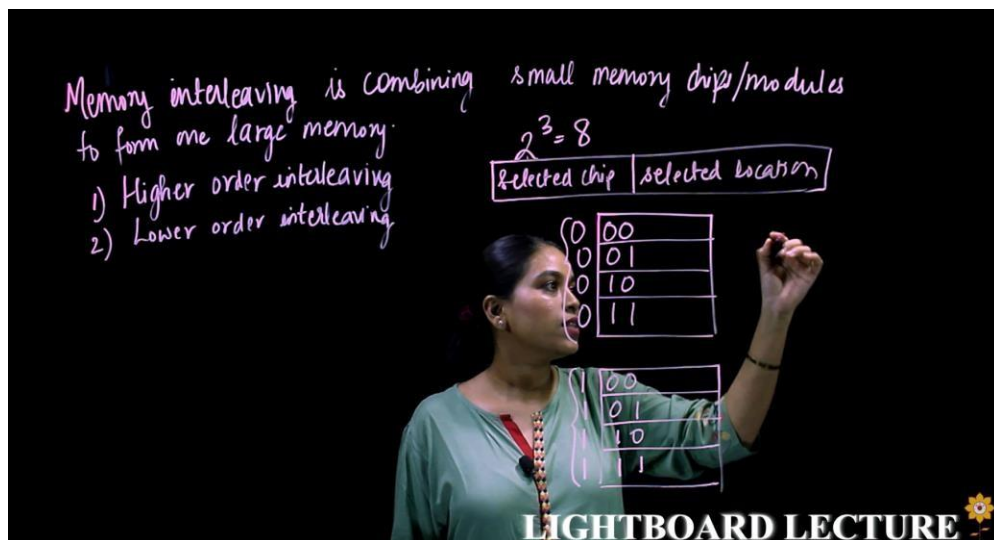
1. Lightboard

Our e-Learning studio in the institute has Lightboard technology which is new way of delivering lectures allowing faculties in institutes, consultants in organizations to enhance their lecture, idea, product, teaching skills and innovations globally.

Lightboard can be used to make online e-learning library for institutes and marketing product information and company consultants to represent their product, technology, idea etc. Without any post processing

Few capabilities/feature of Lightboard is as follows

- i) Facing the viewer



The Lightboard lets us draw highly visible sketches and equations as we lecture, work with the drawings in a natural way, facing the viewer and capture good quality video without post-production editing.

ii) Image Overlay



Image can be used to annotate in real time during lectures to explain the material or product enhancing better visual understanding.

iii) PPT Interface

A photograph of a male lecturer in a pink shirt standing next to a large screen. The screen displays a PPT slide titled "Applications of Nano Materials-II Carbon Nano Materials". The slide content is as follows:

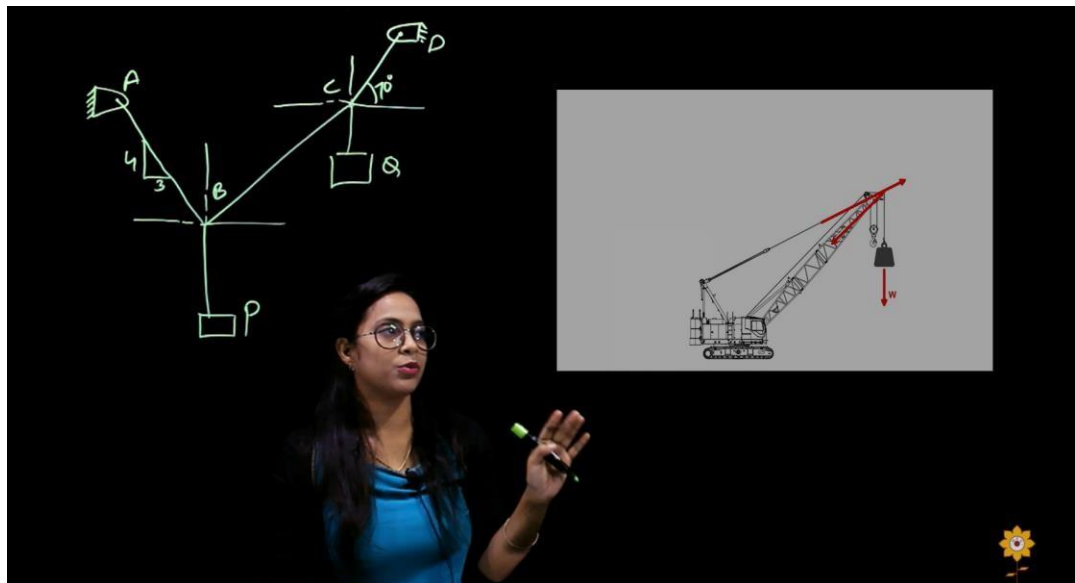
Carbon Nanomaterials

- Fullerenes**
 - Fullerenes are C_{60} molecule of 60 carbon atoms where each molecule is trigonally bonded to other carbon atoms.
 - They have football like structure with 20 hexagonal faces and 12 pentagonal faces.
 - C_{60} has a Molecular diameter is 7.10 Å
- Carbon Nanotubes**
 - SWNT** **MWNT**
 - We have two types of Carbon nanotubes Viz.
 1. Single walled nanotubes (SWNT) They consists of a single graphene sheet rolled into a cylinder, and
 2. Multi walled nanotubes (MWNT) is an arrangement of several co-axial tube of graphene sheets. Each MWNT has from 2 to 50 such tubes.

PPT OVERLAY

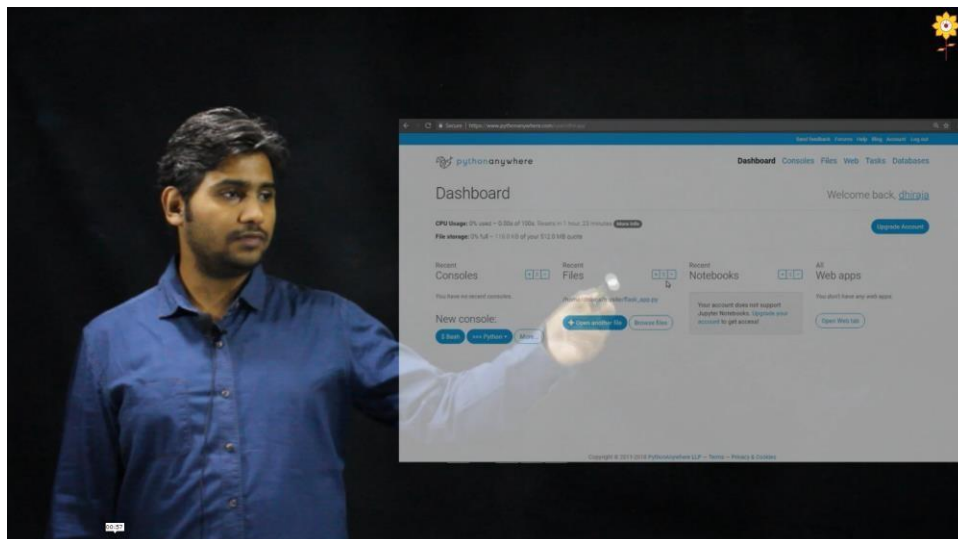
Power point containing images, videos, animation can be interfaced live during lecture to make it more informative.

iv) Video Overlay



Any online and offline video can be projected on screen to make it interactive with lecturer, by also having control to play, pause and stop.

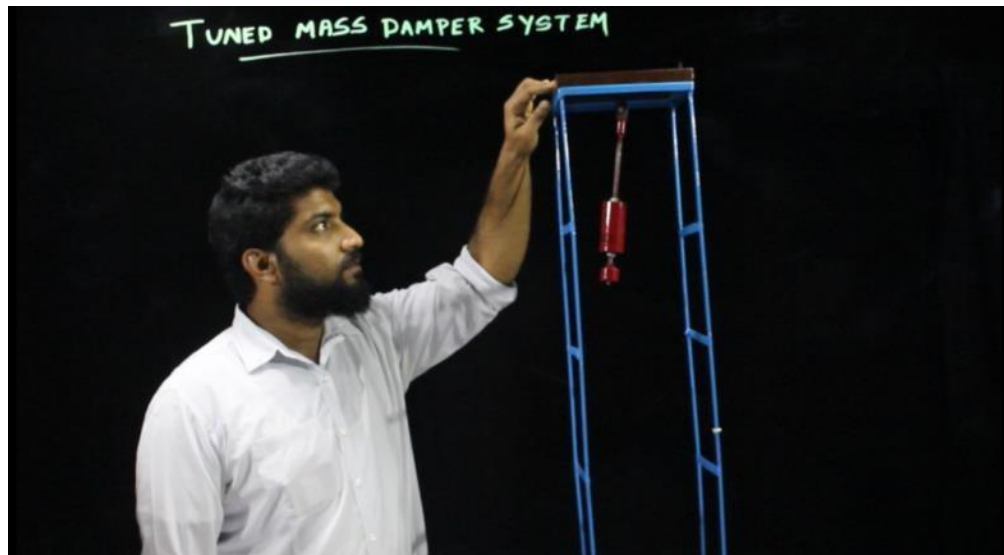
v) ScreenCast



Dr. (Ms.) Sally Enos
PRINCIPAL
MAHATMA EDUCATION SOCIETY'S
Pillai College of Education & Research
Dr Pillai Teacher Training & Research Centre
Plot No 1, Sector-8, Khanda Colony,
New Panvel-410 206.

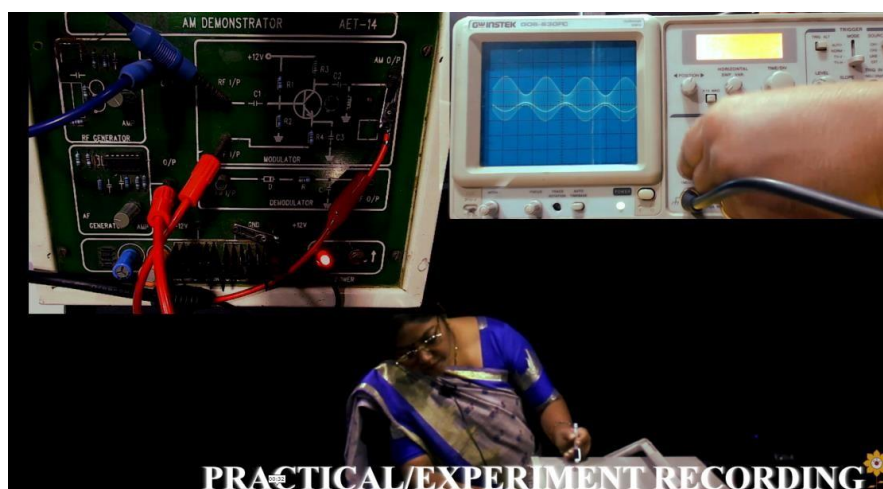
The laptop or PC screen to explain any software's or coding, can be casted on board with 100% visibility, various transparencies and also screen share with screen cast.

vi) Real Setup



Any real instrument, device or setup can be used to demonstrate by annotating with its reference on screen for more real and practical understanding.

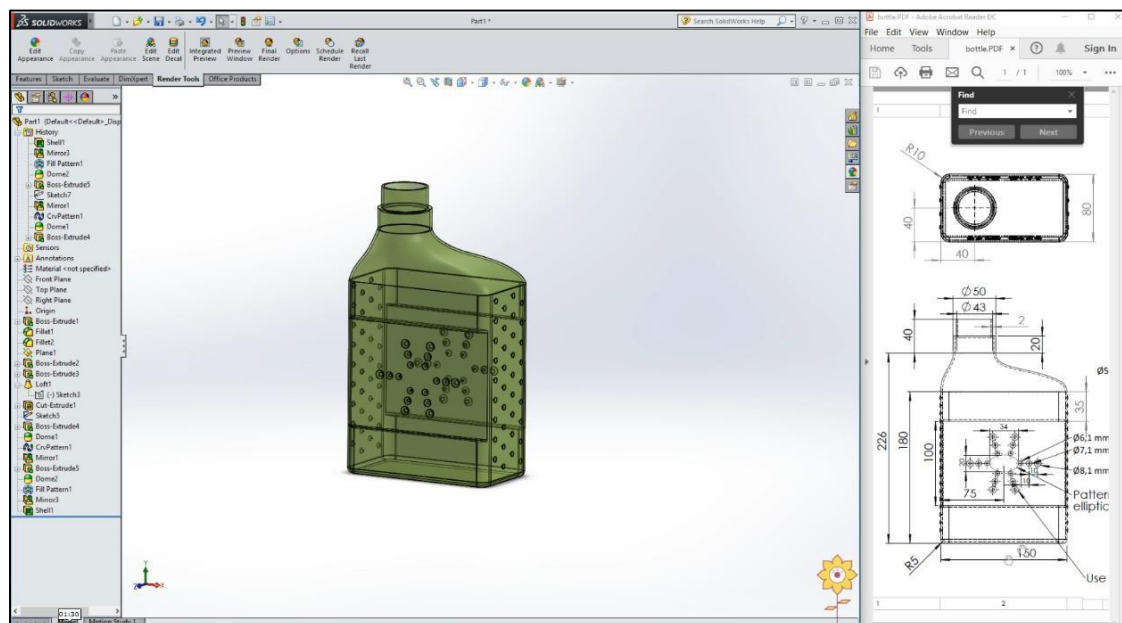
vii) Live Webcam Interface



Multiple camera and webcam can also be projected on board live for showing various in hand small components or notes from book etc.

2. Screencasting

A screencast is a digital video recording of your computer screen and usually includes audio narration. Screencasts are just one of many different types of instructional videos.



Dr. (Ms.) Sally Enos
PRINCIPAL
MAHATMA EDUCATION SOCIETY'S
Pillai College of Education & Research
Dr Pillai Teacher Training & Research Centre
Plot No 1, Sector-8, Khanda Colony,
New Panvel-410 206

3. Pen-point board recording

OBJECTIVES: Students are required to—

- For the designed dimensions, calculate the **minimum length of the column required** and **successively test it** so that the reduced column is just able to withstand the same load without **crushing** (yielding in ductile, cracking in brittle).

$$P_E = \frac{\pi^2 EI}{l_e^2}$$

$$I = AK^2$$

$$\sigma_{cr} = \frac{P_E}{A} = \frac{\pi^2 E}{(l_e/k)^2}$$

$l_e/k \approx 20$
 ≈ 80

Euler's Method

$\frac{dy}{dx} = f(x, y)$ where $y = y_0, x = x_0$. Let $y = f(x)$ be the solⁿ.

$P(x_0, y_0), Q(x_0 + h, y_1)$

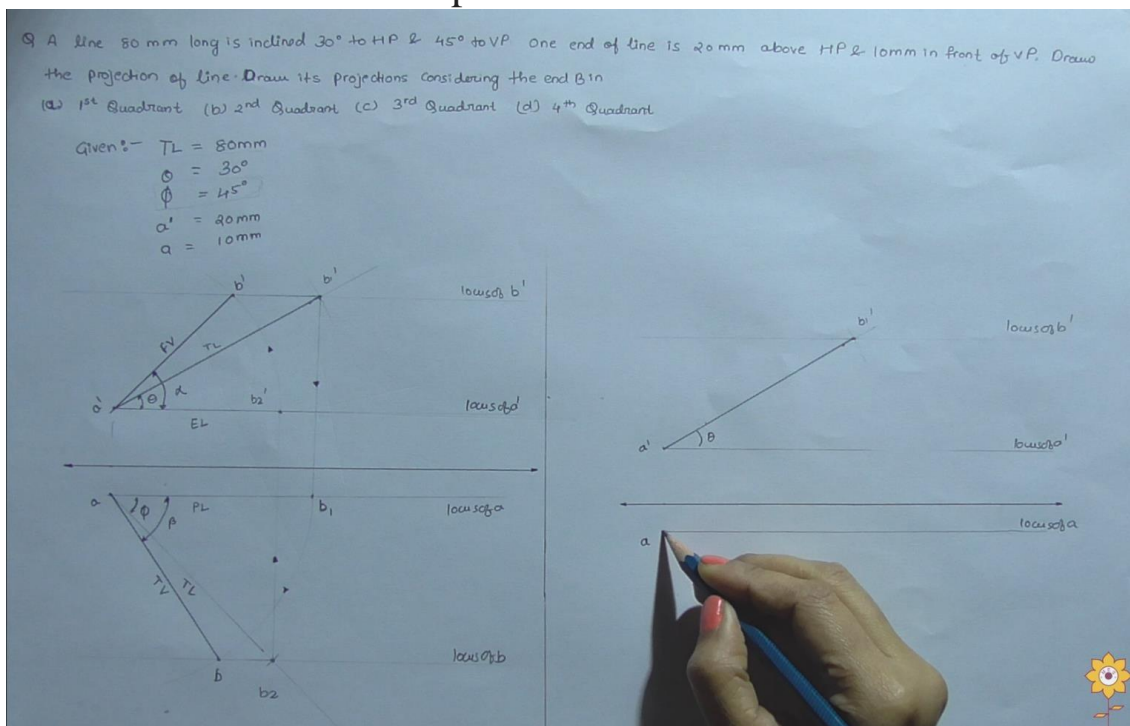
$\Delta PQR,$
 $\tan \theta = \frac{QR}{PR}$
 $\therefore QR = \tan \theta \cdot PR$
 But $\frac{dy}{dx} = 1$

A pen-point board recording is a digital video recording of your writings and usually includes audio narration. Pen-point board

recording is just one of many different types of instructional videos, mainly used for teaching topics that are vast and requires more lecturing time.

4.Overhead video recording

An Overhead/Top Down Video recording is a video recording of your writings and drawing which includes audio narration. Mainly used for teaching subjects like engineering drawing, machine drawing etc... and also for practical explanation small electrical/mechanical components.



Procedures to be followed for making the videos

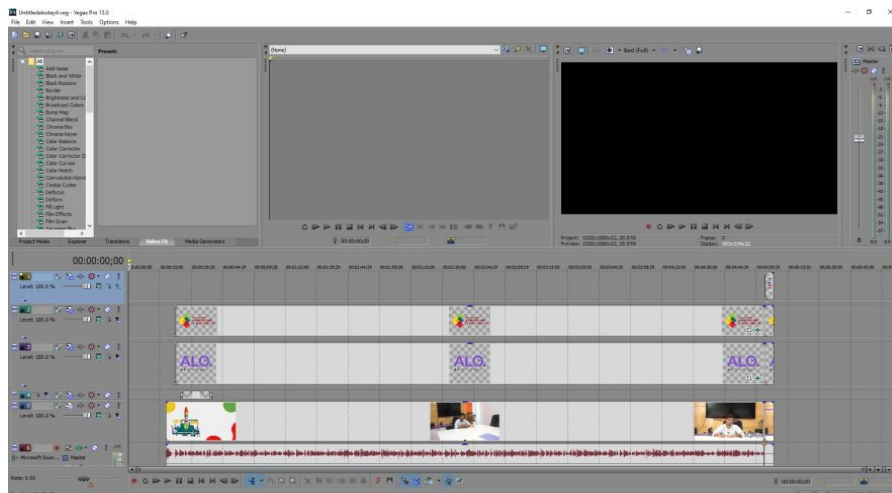
1. e-Learning Studio is made available for booking by teaching faculty staff as well as for students of the institute. External visitors can request a booking which will need to be authorised by the college management.
2. The studio may be made unavailable for block periods during busy times.
3. All booking requests are to be made using the online form shared via email. Booking is also made possible by informing the studio in charge 2 days prior to the planned date.
4. Mobile phones should be kept in silent mode inside the studio.
5. If the faculty want to use the Lightboard for recording the lecture He/she must follow the given guidelines:
 - i) Wear plain dark cloths with no text
 - ii) Well groomed
 - iii) While lecturing don't touch the glass with your fingers
 - iv) Use hand gestures while explaining
 - v) Look into the camera while explaining.
 - vi) Whole lecture in one take, so come prepared
 - vii) If images, videos, and ppts need to be used during lecture, inform the studio in charge one-day prior of the recording day.
6. Ensure the space is kept clean and orderly, and set up remains as it was when the room was opened.

Hardware and software details

To integrate sound system, light system, high configuration computers, teleprompters, collar mics and video cameras are used



For the post production of the videos, software used is Sony Vegas Pro



Dr. (Ms.) Sully Enos
PRINCIPAL
MAHATMA EDUCATION SOCIETY'S
Pillai College of Education & Research
Dr Pillai Teacher Training & Research Centre
Plot No 1, Sector-8, Khanda Colony,
New Panvel-410 206.