# Integrated Virtual Class Platform

# Hand Book

## Consisting of

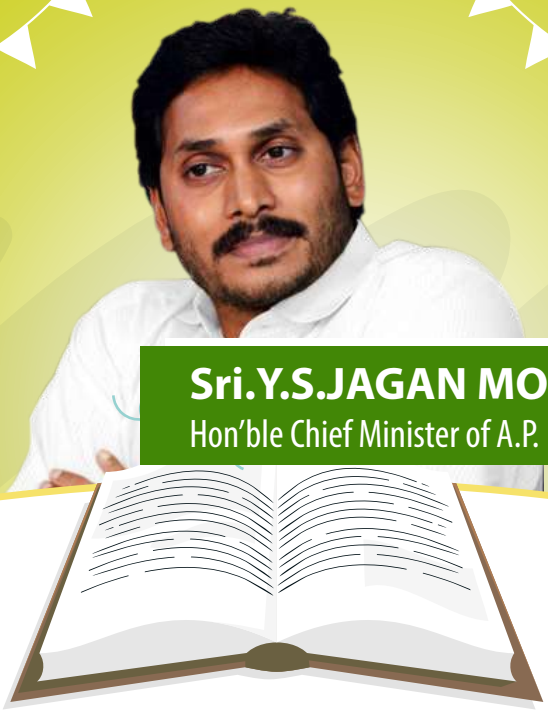
## Learning Management System

## Visual Learning Solution
(For Theory Subjects)

## Virtual Lab Solution
(For Practical Subjects)

## Management Information System

## Department of Technical Education
## Government of Andhra Pradesh



## Sri.Y.S.JAGAN MOHAN REDDY

Hon'ble Chief Minister of A.P.

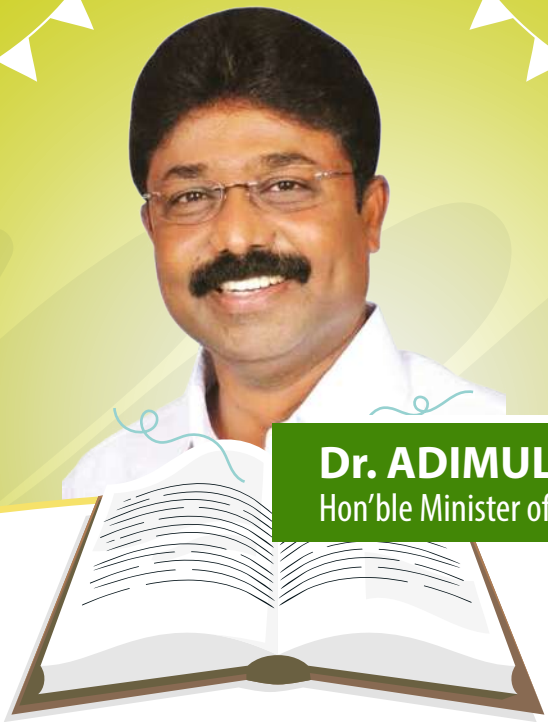
**Message on Visual Learning Solutions, Virtual Lab, LMS and MIS :**

Andhra Pradesh has a vision of becoming the best developed state by 2029, transforming the state into happy, inclusive, responsible, globally-competitive and innovation-driven society through structural transformation and by sustaining double-digit economic growth. To realize the vision, Andhra Pradesh will have to transform into a knowledge driven economy which focuses on higher productivity and higher per capita output.

Education, more specifically an effective technical Education is the vital key enabler of this vision, moving towards transforming into a highly skilled and knowledge driven economy with speed, scale and quality, facilitating our journey to become one of the key globally preferred destinations by 2050.

I am immensely happy to note that our Directorate of Technical Education is presently embarking on an integrated approach of digitizing the polytechnic courses of diploma Engineering contents embedded with visual illustrations of industrial practices, empowering the students with ease of understanding and be more productive. I am also happy to note that these will be propagated through Learning Management System (LMS) so as to promote education anytime anywhere, coupled with relevant Management Information System (MIS) to assess the utilization of this innovative solution at every level.

I am sure that this initiative of the DTEAP will be a step forward towards transforming the State into a "happy, inclusive, responsible, globally competitive and innovation–driven society."



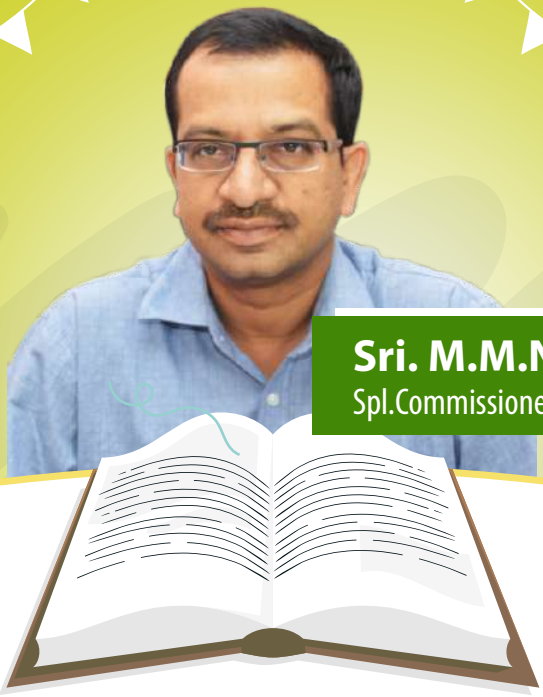
**Dr. ADIMULAPU SURESH**
Hon'ble Minister of Education, A.P.

**Message on Visual Learning Solutions, Virtual Lab, LMS and MIS :**

It's a very proud moment for the State of Andhra Pradesh, in launching this important visual-rich learning solutions for the polytechnic courses and the Virtual Lab solutions, with relevant demonstrations of real-life applications and industry practices. This will make technical education more interesting and engaged, facilitating students' life much easier and be more productive, leading to rapid economic growth of our State.

Populating the polytechnic diploma Engineering Courses through the Leaning Management system (LMS) platform will help all students including those in the remote rural areas too in acquiring the requisite knowledge and skill. The MIS generated through the system will aid in proper planning, scheduling and executing various Higher education and skill development polices of Andhra Pradesh.

This initiative of DTEAP will enable to achieve our Skill Mission of generating 20 million skilled-people in 15 years to meeting skilled human power demands of all missions and shape Andhra Pradesh as the skilled-workforce and Knowledge hub for the world and thereby achieve our vision target of a Human Development Indicator (HDI) of 0.7 that is rated as high by the UNDP by 2019 and a HDI of 0.8 by 2022; and by 2029, the government will ambitiously strive to improve the HDI of the state to a value of over 0.9.



**Sri. M.M.NAYAK, I.A.S.**
Spl.Commissioner, DTE, Govt. of A.P.

**Message on Visual Learning Solutions, Virtual Lab, LMS and MIS :**

Effective Technical Education is the key enabler of economic growth of any State. The challenge today is to significantly improve the quality of the education and training systems so as to ensure richness in values and modern in content and thereby move towards the goal of excellence to build society of our dreams. There is an urgent need for adaptation to and application of new technology to be an integral part of the curriculum development for all stages of education and skill development.

In this context, DTEAP has taken efforts to introduce visual learning and virtual Lab solutions, an ICT based latest technology to infuse Quality Teaching and Learning, bringing products, machineries, equipment and the industry virtually to the students of polytechnics in the state of Andhra Pradesh.

Main objective of this assignment is to create conducive and effective learning environments and accentuate the visual expression and thinking of Youth, by integrating three-dimensional visual thinking into existing critical thinking studies across disciplines at all levels - thro real-life applications and industry practices, carefully crafted and embedded into the syllabus, to ensure that the students believe only on real time learning rather than the assumption / imaginary learning.

These solutions are made available to all polytechnic students through LMS on-line, leading to anytime anywhere learning, besides making this available to all Govt. polytechnics in the State for effective teaching and training. The audio explanation of the visual demonstrations are in English and Telugu for the benefit of rural and remotely located students having limited English proficiency, facilitating high-value integrated e-Learning anytime, anywhere, thinning language barriers and Urban-Rural Divide; thus benefiting all from different environments.

This ground-breaking inventive system is expected to generate adequate skilled and productive manpower in the State to meet the global challenges of the 21st century and hence transform our State as a global knowledge and skilled resource hub, leading to All-Inclusive Growth.

iconma
Expertise You Can Trust

iLms

A custom framework that addresses all the e-learning needs of educational institutions & corporates.

iLMS promotes organized learning, training, monitoring & assessment.

it enhances the overall learning experience.

## SALIENT FEATURES

- E-Courses (Documents, Audio & Vidoe content)
- Adaptive Learning
- Psychometric Analysis
- Certification and Badges
- In-Line Dictionary
- Notifications & Self help tools
- Progres Tracking
- Content Approval and Publishing
- Online Asessment & Reporting

## iLMS BENEFITS

- Easy Course Management
- Self Learning
- Mobile Learning
- Self & Instructor Based Assessments
- Resource Library
- Personalized Dashboards
- Grading & Certifications
- Calender & Events Management
- Blogs & Forums
- Activity Feeds & Alerts
- Flexibility & Scalability
- Role Based Access
- Feedback Management
- Robust Analytics & Reporting
- Third party tols integrations
- PHP & Sharepoint Versions

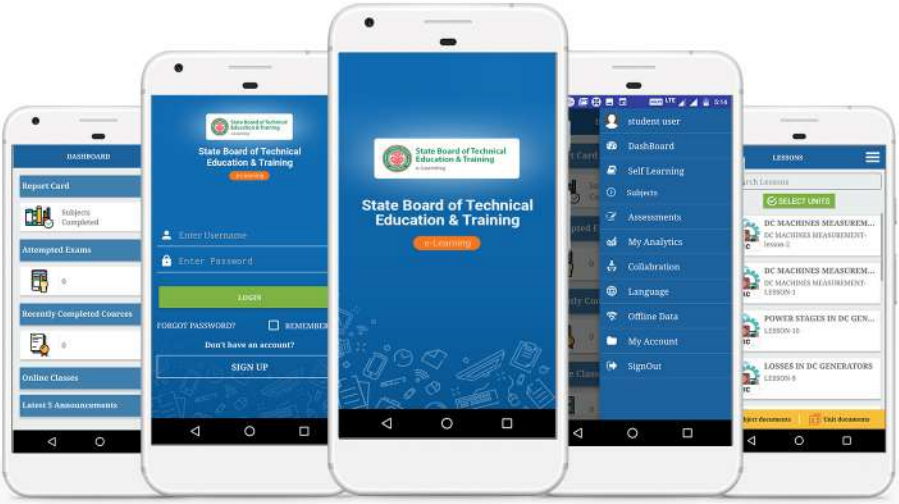
## ADVANTAGES OF ILMS

With iLMS, direct your target users to the correct resources. Create online certifications and assessments to gauge their knowledge and measure understanding of procedures. Create training material as per standards.

- Online Registration
- Course Schedules & Enrolment
- Content Repositories
- Dashboards
- Online Exams
- Certifications & Badges
- Online Evaluations
- Virtual Learning
- Attend online classes
- Get consistent answers and feedback
- Receive training
- Schedule courses
- Provide feedback on progress
- Publish consistent instructions
- Measure understanding

## ILMS WEB APPLICATION SCREENS

# ILMS MOBILE APP SCREENS



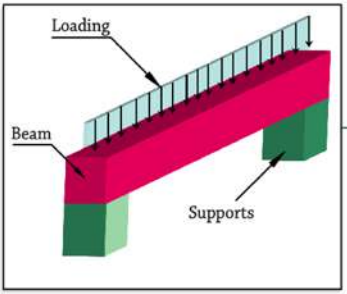
# LMS – Content in PDF Format

## Introduction to beam

- Beam is a horizontal structural member which is very long compared to cross sectional dimensions (length >> width b, depth d).
- It is suitably supported and subjected to transverse loading.
- Forces applied will induce bending of the member in an axial plane.

Video Represent in "Telugu"

Video Represent in "English"




2D Image

**Fig 1: Beam**

## Beam under the loading

- Bending implies deformation of beam induced by loads perpendicular to its axis.
- Every section of beam is subjected to Bending moment and Shear force.
- BM & SF vary across the length of beam depending upon the loading.
- Internal stresses develop in the beam to resist Bending moment i.e, Bending stresses and shear force.

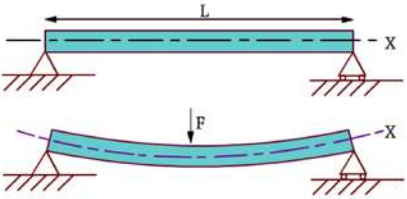



**Fig 2: Beam under the load**

-- PAGE END --

# Handbook for Visual Learning Solution

## I. Hardware/Software Requirements:

| | | |
|---|---|---|
| 1. | OS | : Windows 7 or above |
| 2. | Processor | : 2 GHz or above |
| 3. | RAM | : 2 GB (minimum) |
| 4. | Hard Disk Space | : 80 GB (Minimum) |

## II. Instruction

1. Connect the Hard Disk and copy the respective subject in to your PC.
2. Open the Department folder and then open the subject folder.
3. Double click **".exe"** file to open.

| Name | Date modified | Type | Size |
|---|---|---|---|
| subject | 7/5/2018 6:33 PM | File folder | |
| Organic_Chemical_Technology.exe | 7/4/2018 7:15 PM | Application | 10,231 KB |
| xqlite3.dll | 11/26/2010 12:13 ... | Application extens... | 847 KB |

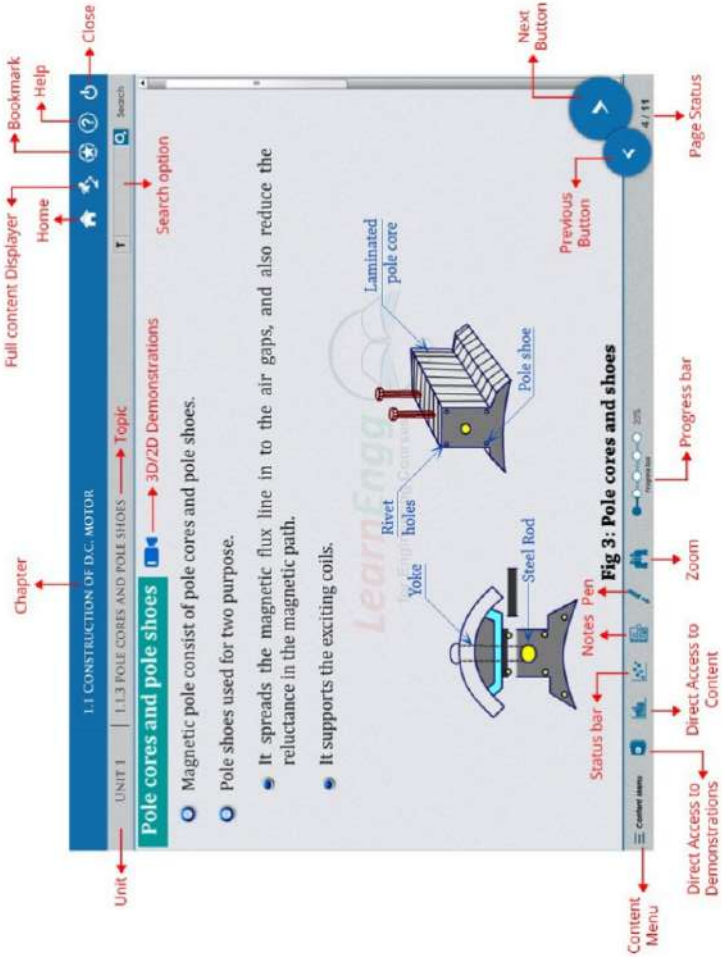
4. For the first time product installation & Registration, **internet connectivity (No proxy) with admin privileges are required.**
5. Enter your Name, Email Id and Mobile Number and click submit.

6. In case of Registration failure, kindly disable the Anti Virus protection and turn off the Windows Firewall.
7. Click **"Yes"** to proceed further.

8. Click on **"Click Here to Proceed"** to move on Home panel.

9. The above figure shows Home panel tools which has options to view Content Home, Course Objectives, Syllabus, Reference Books, LearnEngg - Profile, Direct Access to Content/Demonstrations, Bookmarks, Units & Formulas, Solved problems, Assessment, Acknowledgement, Contacts and Help File. Clicking on any of the option will take to the particular page. To close/go to the subject page, click on close button.

## III. Instructions for the User Interface:






Copyright©2018 Infoplus Technologies Pvt. Ltd.

## HOME PANEL TOOLS

### 1. CONTENT HOME

Clicking on this icon, will take you to the content menu option where the table of contents will be present.

### 2. OBJECTIVES & SYLLABUS

This icon will lead you to course objectives page along with the syllabus

### 3. REFERENCE PLUS

Click on this icon to get various references about the subject

- Recommended text books - User can get a list of recommended text books for the particular/desired subject to refer.

- Content Reference books - Here user can get a list of books which are all related to the content of the particular/desired subject for reference.

Copyright©2018 Infoplus Technologies Pvt. Ltd.

- Web reference - Displays online/web references or links to refer.
- Video source - Displays online video references.

**4. TO THE TOPIC**

To see all the chapter title pages under every Unit.

**5. D-HUB**

Click on this to see all the Videos under every Unit.

**6. Y-TUBE**

User can view the list of bookmarked videos/favorite videos.

**7. PRODUCT MANUAL**

User can view the product manual for easy usability of the User Interface.

**8. SOLVED PROBLEMS / EXAMPLES**

On clicking this icon, user can have some of the examples/solved problems related to the particular chapter of every unit.

Copyright©2018 Infoplus Technologies Pvt. Ltd.

**9. TEST YOUR LEARNING**

User can test them-selves by undertaking the assessment test under every unit.

**10. SI UNITS, FORMULAE & STANDARDS**

It displays all the SI units, abbreviations, formulae and standards which are related to the desired subject.

**TOOLS**

**1. HOME**

Clicking on this icon will take you to the home panel.

**2. CLICK-BY-CLICK CONTENT DISPLAY (ON/OFF)**

Using this option, all the content will be displayed at once rather than Click by Click.



Copyright©2018 Infoplus Technologies Pvt. Ltd.

### 3. CONTENT MENU

Click-on Content MENU [located at bottom-left to view units in the subjects]

Mouse-over & click on the Menu (button) to choose/ select your desired unit, which will pop-up lessons, which on click would further exhibit the topics in that specific lesson. This enables to navigate through any desired portion of the subjects – Demonstrating non- linear methodology of the product.

### 4. D-HUB

Click on this to get all the Videos under every Unit.

### 5. TO THE TOPIC

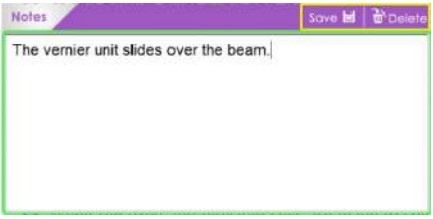
To see all the chapter title pages under every Unit.

Copyright©2018 Infoplus Technologies Pvt. Ltd.

## 6. VIEW STATUS BAR

View status bar will list all topics and upon going to until the end of the page, a tick mark appears signifying that “Entire subject topics are successfully viewed by User”.

## 7. NOTES




Clicking on notes enable notepad for the purpose to add additional notes which could be stored and retrieved when required.

## 8. PEN

To highlight the key points, also to draw a new diagram or illustrate the existing diagram with features like:

- Pen
- Erase line
- Erase all
- Line thickness
- Color Panel

Copyright©2018 Infoplus Technologies Pvt. Ltd.

**9. ZOOM**

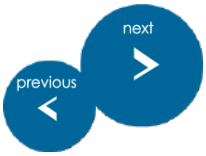
Click-on Zoom to choose your desired option to maximize or minimize the content text.

- Zoom In
- Zoom out
- Actual Size

**10. PROGRESS BAR**

The progress bar displays the current progress of the entire subject in percentage.

**11. PAGE NAVIGATION TOOL (PERVIOUS / NEXT)**




Click on left / right arrows to move to previous or next page. Alternately, the left and right arrow keys of the system keyboard could also be used.

**12. BOOKMARK**

User can bookmark the pages which they wish to refer it in future. Under bookmark icon, two options will be present, one is to bookmark the desired page and another is to view the bookmarked pages.



Copyright©2018 Infoplus Technologies Pvt. Ltd.

**13. HELP**

User can view the product manual for easy usability of the User Interface.

**14. SEARCH**

**Search by Text:**

Search with keywords to reach your desired lesson/topic with ease.

Search T

**Search by Video:**

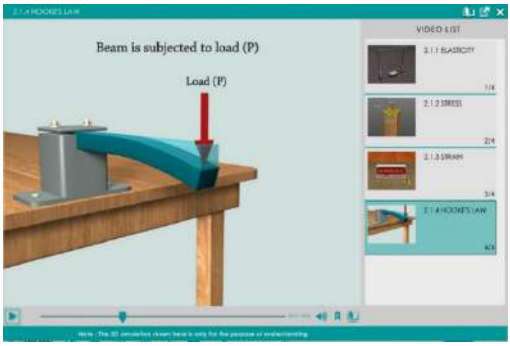
Search with keywords to view desired videos.

Search

**15. VIDEO**

Click on the Video icon embedded within the content to view 3D/2D visual/video, relevant to the topic being taught.

Note: Video icon will work only on “Actual Size” mode and not in Zoom in/Zoom out mode






Copyright©2018 Infoplus Technologies Pvt. Ltd.

- Each video (while playing the video) has features like Play, Pause, Stop, Replay, volume control and page scroll for viewing all videos & close options.

- Used to Bookmark the videos.

- Bookmarked/Favourite videos will be listed.

- Takes to the relavent content/topic page of the current video.

- To maximum & minimize video player. Video player can be dragged for the easy usability.

- Right side of the video player shows the list of videos present in the particular chapter.
- Note: Closing video will get back to current topic page.

Copyright©2018 Infoplus Technologies Pvt. Ltd.

**16. CONTENT DISPLAY**

For every click, the contents will be displayed line by line until the end of the page which will be denoted by "page end" symbol.

Alternatively, to view the full content of the page, navigate to next page (Next button) and use back arrow (Previous button) to view full previous page.

**-- PAGE END --**

**17. PICTURE POP UP**

Click on the 2D Figure to keep it floating in the page on view so that reference can be made easily, when the page scrolls down in a multipage derivations / exercises. Similar to video, picture pop-up will work only on "Actual Size" mode and not in "Zoom In" / "Zoom Out" mode.

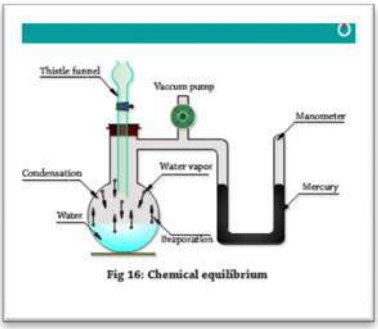


Fig 16: Chemical equilibrium

**18. CLOSE / QUIT**

To close the page or subject (located on top-right corner).

CLOSE



Copyright©2018 Infoplus Technologies Pvt. Ltd.

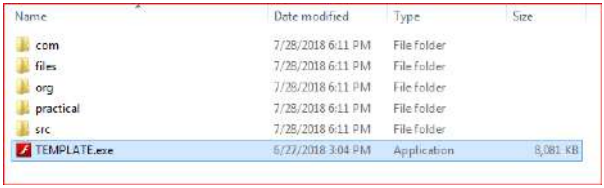
# Handbook for Virtual Lab Solution

## I. Hardware/Software Requirements:

| | | |
|---|---|---|
| 1. | OS | : Windows 7 or above |
| 2. | Processor | : 2 GHz or above |
| 3. | RAM | : 2 GB (minimum) |
| 4. | Hard Disk Space | : 80 GB (Minimum) |

## II. Instruction

1. Connect the Hard Disk and copy the respective subject in to your PC.
2. Open the Department folder and then open the subject folder.
3. Double click **".exe"** file to open.

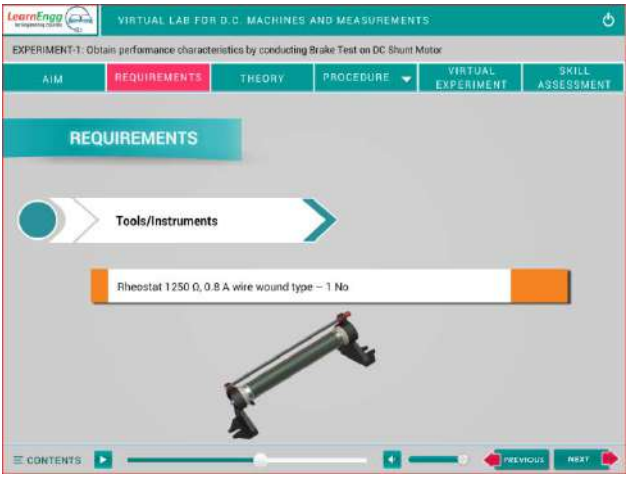


| Name | Date modified | Type | Size |
|---|---|---|---|
| com | 7/28/2018 6:11 PM | File folder | |
| files | 7/28/2018 6:11 PM | File folder | |
| org | 7/28/2018 6:11 PM | File folder | |
| practical | 7/28/2018 6:11 PM | File folder | |
| src | 7/28/2018 6:11 PM | File folder | |
| TEMPLATE.exe | 6/27/2018 3:04 PM | Application | 8,081 KB |

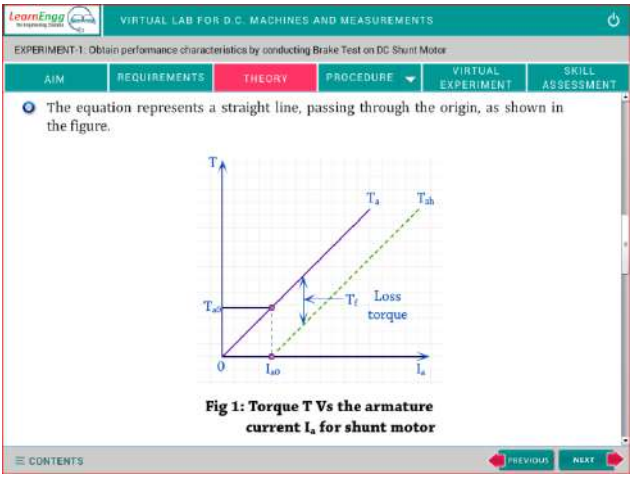
4. Click on **"Click Here to Proceed"** to move on Home panel.

5. **AIM:** The aim of an experiment is the objective. It says what can be learned from the experiment.

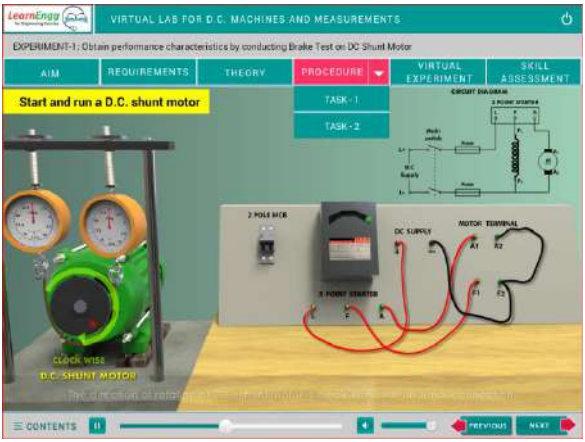
6. **REQUIREMENTS:** In this users have to know, which are the materials required for the particular exercise.



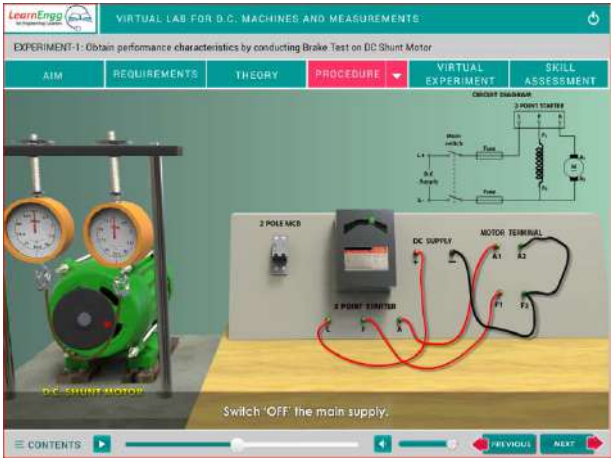
7. **THEORY:** In this users will able to know the theoretical parts of the particular exercise with neat diagram and explanations.




8. **PROCEDURE:** In the procedure tab, we will be assigning some tasks to know the complete experiment.



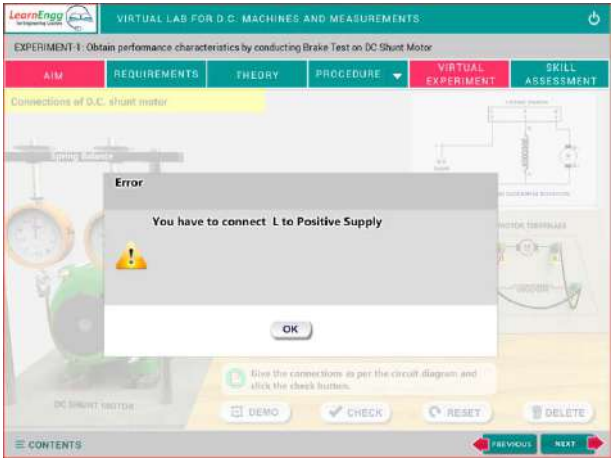
9. When clicking the Task icon, users can view the video of the complete experiment with voice.




10. **VIRTUAL EXPERIMENT:** In this users can perform and implement the experiment manually.

11. Finish all the connections, click on **Check** to verify. If the connections are wrong, the following message will appear.

12. If some connection left, the following message appears.

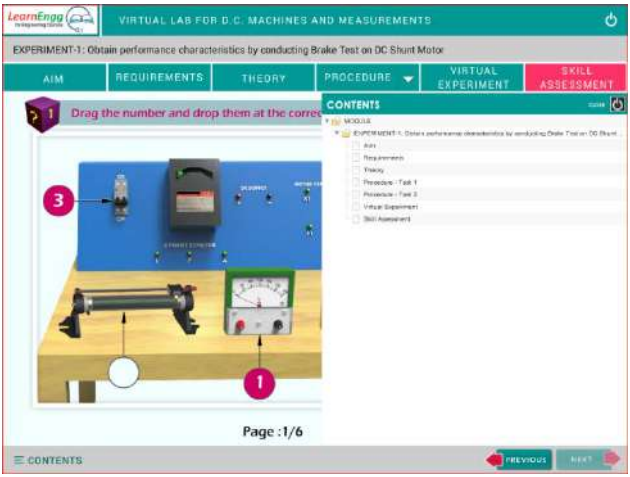


13. If users want to delete a particular connection click **Delete** icon first and then click on the particular connection.

14. If users are not able to give the connections properly, kindly click **Demo** icon to view the demonstration of the experiment.

15. SKILL ASSESSMENT: User can test them-selves by undertaking the assessment test under every experiment.

16. **CONTENTS:** Click-on Content MENU (located at bottom-left) to view respective modules.



UNEECOPS
quest for excellence

# DTEAP-MIS

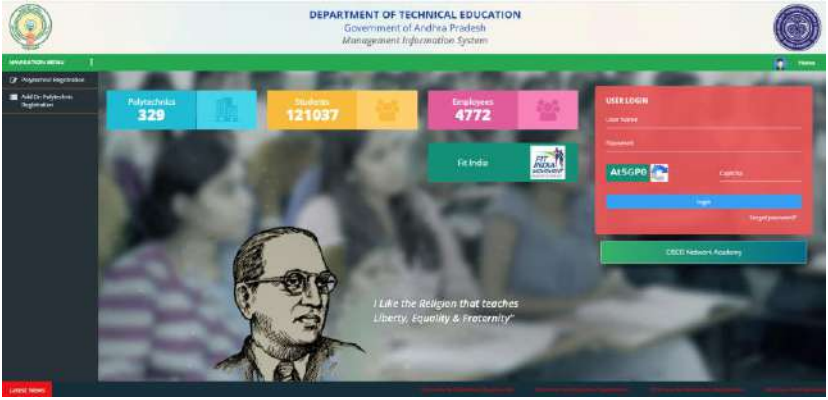
UNEECOPS
quest for excellence
A CMMI Level 3 Company

## Department of Technical Education, Andhra Pradesh.
## Management Information System

| Web Based | User friendly | Fully Secure |
|---|---|---|
| No extra programmes needed to be installed in your computers. | Anyone with basic knowledge of computers can use. | Data travels in encrypted form. |

A breakthrough educational Campus Management Software based on the understanding that running Educational Institutes is very sophisticated. MIS automates various aspects and functionalities of an educational institute, such as Academics, Administration, Library, Human Resource, Communication and more. Generates reports and leaves the administration free for taking strategic decisions.

## Here is the landing page of MIS:




The Audience/Stakeholders of this MIS are:

- CTE Office
- SBTET Office
- DDO/AO
- Principal
- HOD
- Employees
- Librarian
- Students

# Why MIS

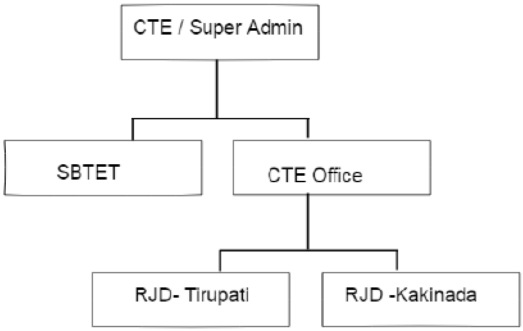
Management Information System is aimed at providing an application to make easy of management of academic activities in all the Polytechnics in the state of Andhra Pradesh which includes Government and Private type of institutes. In current manual process the student profile and employee profile remains viewable up to management only in hardcopy documents and maintains their attendance manually in registers. For example if we take the current manual process issue and return the books to students and employee in library done through manual process and maintain the data in hardcopy manner. Board assigned the academic schedule to students and the students follow that schedule which includes the practical and theoretical training and the Polytechnic assigned assignments to students. All of these manual activities can be tracked online with the implementation of proposed system. By implementing the proposed system monitoring will become easier and accurate data available with management.

---

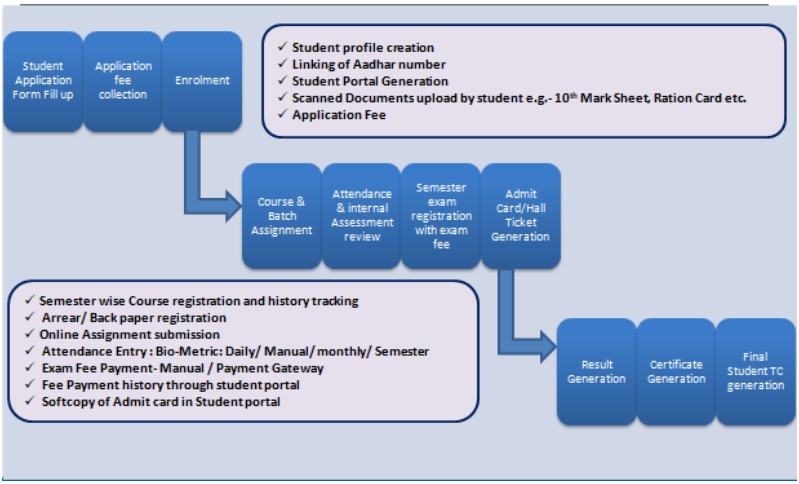
## MIS covers the functionalities

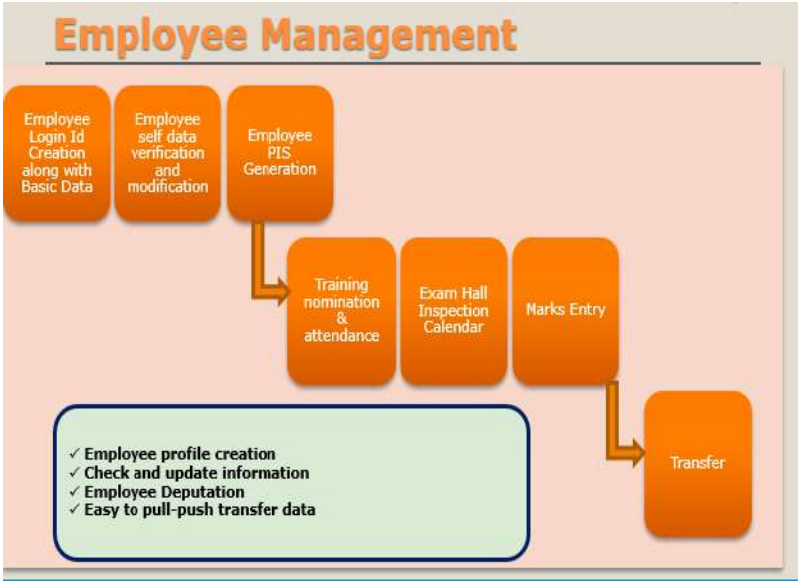
- ✓ Placement Management
- ✓ Affiliation Management
- ✓ Inspection Calendar & Reports
- ✓ Stock-Asset-Procurement Management
- ✓ Student Management
- ✓ Course Management
- ✓ Examination Timetable Management
- ✓ Assignment Management
- ✓ Pre-Examination Management
- ✓ Post-Examination Management
- ✓ Staff Student Portal
- ✓ Assignment Tracking
- ✓ Attendance Management
- ✓ Admin Panel
- ✓ Certificate Management
- ✓ Reporting & Analytics
- ✓ Employee Management
- ✓ Training Management
- ✓ Library Management

**Analytical Reporting Hierarchy:**



# Student Life Cycle



# Virtual Classroom Dashboard

Technical Education

Government of Andhra Pradesh

## Dashboard Features

- User Quantity Analysis
- Day wise analysis on duration of the calls
- Day wise analysis on total no of calls
- Call Quality Analysis with Drill down reports
- Day wise User Attendance List
- Call Minutes by Device/OS analysis
- Call History
- Record on Directory and Meetings Conducted.

# Quantity Analysis

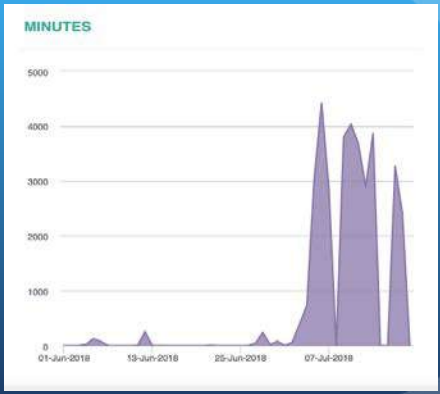
Total No of Calls

Total no of Call Minutes

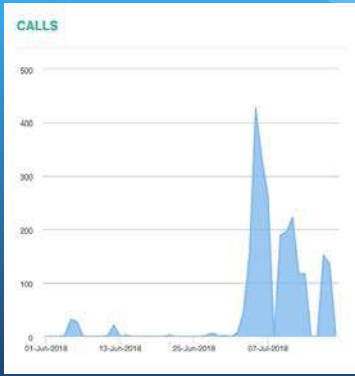
Total No of Users

Average Call Time(min)

# Day wise analysis on duration of the calls



# Day wise analysis on Total no of Calls



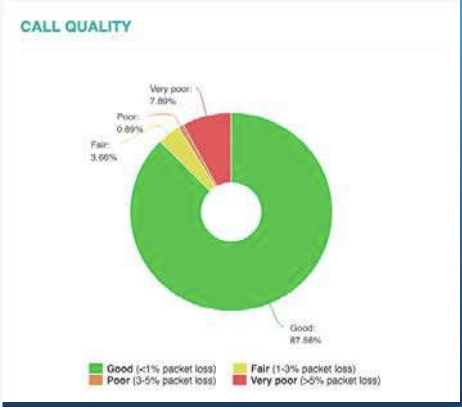

# Call History

CALL HISTORY

| Name | Date | Duration | Participants |
|---|---|---|---|
| Parvathi Puram vizianagaram | Today at 3:26 PM | 4 min | 2 |
| Commissionerate of Technical Edu | Today at 2:41 PM | 14 min | 5 |
| testing | Today at 2:34 PM | 4 min | 2 |
| Anathapur | Today at 12:39 PM | 6 min | 2 |
| Kalikiri - CHITTOOR | Today at 12:28 PM | 1 min | 2 |
| Women Kadapa | Today at 12:09 PM | 2 min | 2 |
| Women Kadapa | Today at 11:59 AM | 1 min | 2 |
| Minorities B.Thandrapadu-Kurnool | Today at 11:41 AM | 1 min | 2 |
| B.Thandrapadu- Kurnool | Today at 10:28 AM | 2 min | 2 |

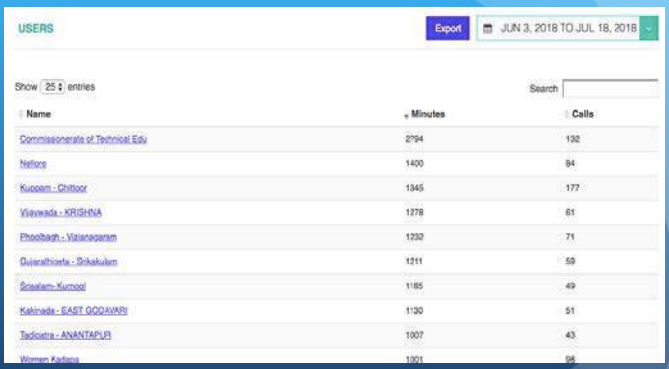
- Gives the in depth details on the day wise duration and no of participants connected during each Virtual Classroom held.

# Call Quality Analysis




- Enables us to review individual quality segment college wise with drill down reports.
- Analysis is given based on the Internet Bandwidth connectivity at college level.
- Each Polytechnic College Call status can be monitored effectively

# Day wise User Attendance List



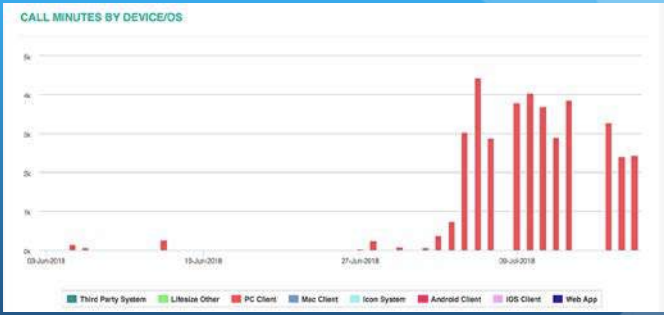
USERS

Export | JUN 3, 2018 TO JUL 18, 2018

Show 25 entries | Search

| Name | Minutes | Calls |
|---|---|---|
| Commissionerate of Technical Edu | 2794 | 132 |
| Nellore | 1400 | 84 |
| Kuppam - Chittoor | 1345 | 177 |
| Vijayawada - KRISHNA | 1278 | 61 |
| Phoolbagh - Vizianagaram | 1232 | 71 |
| Gujarathiperla - Srikakulam | 1211 | 58 |
| Srisailam- Kurnool | 1185 | 49 |
| Kakinada - EAST GODAVARI | 1130 | 51 |
| Tadipatra - ANANTAPUR | 1007 | 43 |
| Women Kadapa | 1001 | 98 |

# Call Minutes by Device/OS analysis




Provides us the details on the platform used to connect Virtual Classrooms by the users

Thank You !!

Virtual Classrooms – Technical Education (AP)

## Help Desk

**LearnEngg** support team is committed to provide support services to ensure that the products and services are up and working all the time.

**E-mail:** support@learnengg.com

**Toll Free No. : 1800 102 6488**

**Mobile Nos. : +91 – 9962444676 / +91 – 9962255055**

Web: **www.LearnEngg.com**

(Helpdesk Timing: **9.30 AM to 6.30 PM – Monday to Friday)**