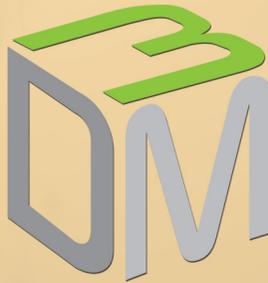


# 3DM Classroom

(A 3D ACCELERATED SELF-LEARNING-CUM-TEACHING AID)

## HAND BOOK



**3DM**

LEARNING | REDEFINED

## PREFACE

Effective Technical Education is vital among the key enablers of rapid Economic Growth. However the challenge today is to significantly improve the quality of the technical Education and move towards the goal of excellence. National Policy of Education (NPE), 1986 highlighted the need for strengthening the Polytechnic Education System to cater to the need of emerging industries and technologies. Therefore the existing education system needs to be supplemented with State-of-the-art ICT methodology to achieve world-class standards - the teaching-learning process to be aptly supported, as in the West, with visualizations of real-life examples, demonstrations and practical / industrial illustration for ease of comprehension and longer retention, resulting in virtually bringing the industry into the classroom.

Infoplus Technologies Private Ltd (Infoplus), an ISO 9001:2008 Certified Company, promoted by academicians and experienced team from engineering services, backed by an esteemed advisory council consisting of former Vice Chancellors, eminent professors and industry experts, has innovated newer and cost-effective delivery tools with digital learning contents, an integrated 3D medium platform for Technical education, skill Development and training, called **3DM™ ClassRoom** - powered by technology - to infuse ICT into Appropriate Areas of Quality Teaching and Learning, bringing products, machineries, equipment and the industry virtually to the class-room.

**Major Features of the Product and benefits to the Institute and the students include:**

**1. Visual-rich Accelerated Learning-cum-Teaching Tool :** Over 1000 slides of texts, 2D illustrated images, derivations and exercises as authoritative content conforming to the prescribed syllabus, aptly embedded with a large number of 3D animations of real-life applications and industry practices, facilitating quick grasp of the concepts and its applications enabling the student to perform his examination and job interviews with great success, thus transforming students from different environment "Industry-Ready".

**2. An excellent Teacher-Aid:** This ensures that the teacher has the best base content with large number of 3D visuals, to adapt for his lecture focusing more on effective delivery than on material preparation. Features include "interactive pen" to highlight key points / draw new diagrams; "Note Pad" to

add new notes; right-sized font and color scheme for clear visibility without darkening the class room; Print, Direct Access panel for content and video for easy access, Progress bar, status bar, keyword search for text & video, Self-assessment, Quiz, FAQ's; Audio and annotations in simple English for all visual illustrations; zoom features to cover over 60 students, if need be, in a classroom.

**3. Non-Linear method of Teaching and Floating window:** The total subject can be traversed for quick reference by click of a button – book-like indexing. Pictures / images and 3D demonstrations are made floating so that it could be stationed on any part of the screen, while viewing thro multipage derivations / problems / exercises.

**4. Global Standards in Engineering Education :** Authored by eminent Professors and subject experts from Academia and Industry, 3DM™ Classroom facilitates building excellence in the Technical / Vocational Education / skill development and training to meet the knowledge challenges of the 21<sup>st</sup> century and transform our country as a global knowledge leader.

**5. Modularly Structured:** The content is modularly structured for each branch of Engineering, enabling easy assembling for adaptation to specific requirement both in extent and / or depth of every University / Institute.

3DM™ technology-enabled education is the BEST SOLUTION for capacity-building of vital resources for rapid economic growth and to thin-down the Rural-Urban divide through bridging the gap between Industry and Institute, leading to ALL-INCLUSIVE and well-sustained GROWTH of our Country.

A detailed study of 3DM implementation has shown that the voluntary attendance and the mean score of the class have well improved. Further, the teacher could save 25% to 30% time in writing notes on the blackboard. Thus the use of 3DM™ Classroom facilitates increase in pass percentage and employability of the students and hence increases the intake of students by the Institute / College / University.

**This hand book details all the features associated with 3DM™ Classroom so as to enable the Faculties to be more effective and efficient in the best interest of the students in particular and the State and Country in general.**

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### I. Hardware/Software Requirements:

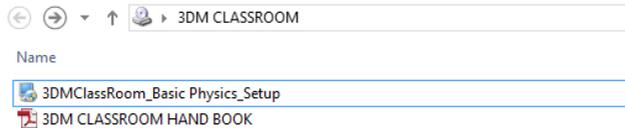
1. ROM : DVD
2. Processor : 2 GHz and above
3. RAM : 2 GB (minimum)
4. Hard Disk : 80 GB & Free space up to 50%  
for buffering of data
5. OS : Windows XP/7/8 or above

### II. Instructions for the DVD:

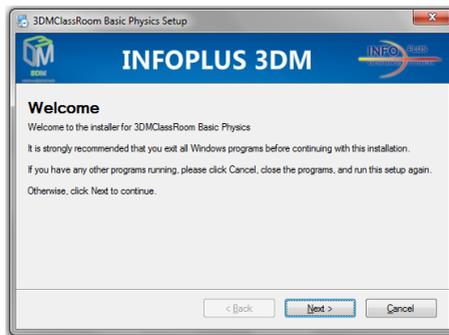
1. This is a DVD and will play only in DVD ROM.



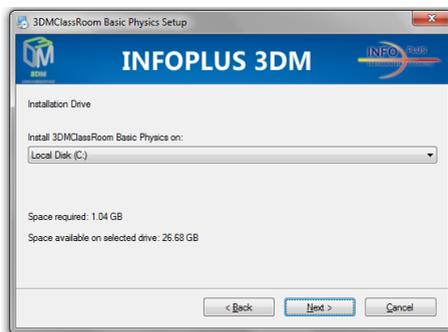
2. This DVD contains 3DM Classroom subject in exe format and a Hand book in pdf format.



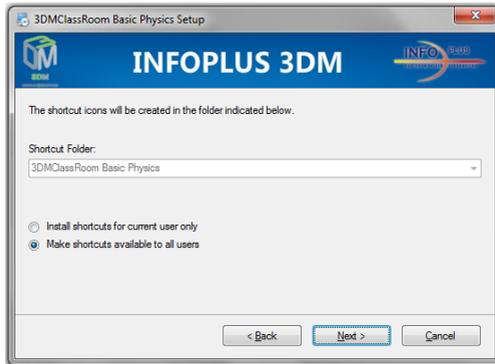
3. For the first time product installation & registration, **internet connectivity (No proxy) with admin privileges** are required. Kindly make sure these requirements are equipped in the system before installing the 3DM Classroom product.
4. Click on the Application file and follow the procedures as illustrated below.



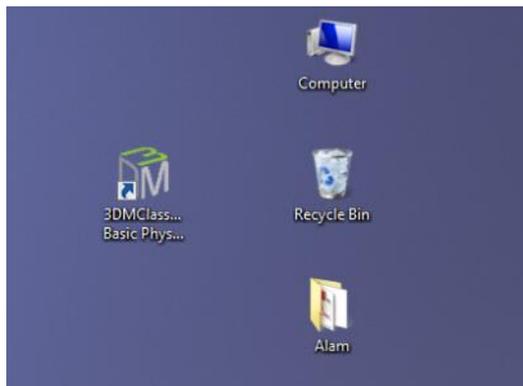
5. The below figure shows on which drive the product needs to be installed.



6. Choose the second option and click on Next and finish the Installation.



7. Start the application by clicking the Shortcut file created on the desktop.

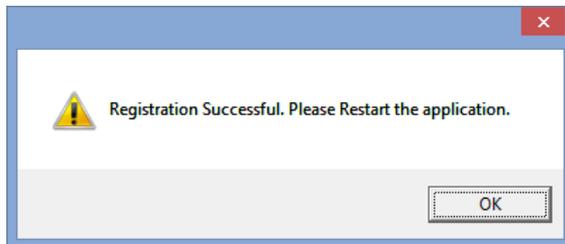


8. As shown in the below figure, choose your institute & fill all the details, then activate the product. **(Note: Internet connection without a proxy is needed here for the activation.)**

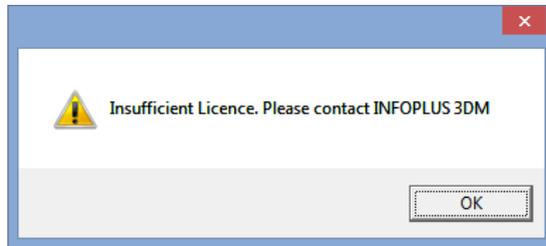
The screenshot shows a web-based registration form titled "Registration Form" with the "INFO PLUS TECHNOLOGIES (P) LIMITED" logo. The form contains the following fields and options:

- Subject:** Basic Physics
- Institutions:** Santoshra Vaseon Chhatrapati, Dighanta
- Licence ID:** #####JAC055AQIYJBAH
- Authorized Person Details:**
  - Name:** #####
  - Designation:** #####
  - Mobile No.:** +91 9999999999
  - Email ID:** #####@gmail.com
- Note:** This software is the property of The Department of Technical Education and Training (WBCTE), Govt. of West Bengal. This could be accessed and used only in the campus of the institute under WBCTE. So
- I Agree the terms & conditions
- Buttons:** Activate, Close

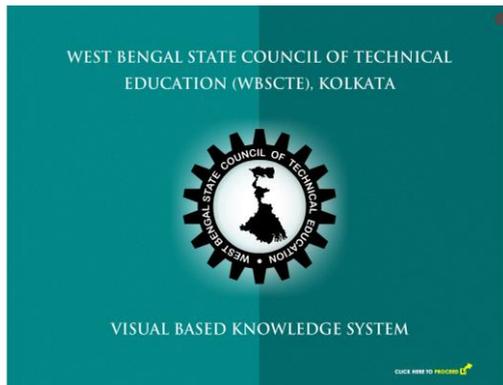
9. Once the registration is completed, the following message will be displayed. You can restart the application.



10. If you don't have sufficient license, you cannot able to access the 3DM Classroom and the following message will be displayed. In that case, please contact the concerned authorized person in your institute.



11. 3DM Classroom subject can be accessed by clicking on the shortcut file on the desktop. Click on proceed to go into the subject. If you want to close the subject, click on the close button located on the top-right corner.





VISUAL BASED KNOWLEDGE SYSTEM  
FROM



INFOPLUS TECHNOLOGIES PRIVATE LIMITED

No. 61, Developed plot estate, Perungudi, Chennai – 600 096

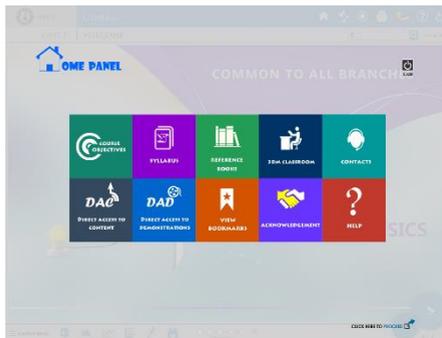
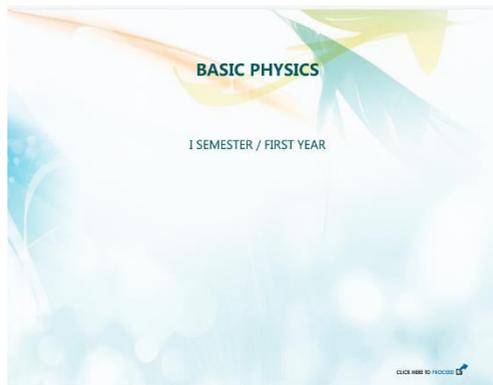
Tamil Nadu, INDIA

www.infoplus3dm.com | contact@infoplus3dm.com

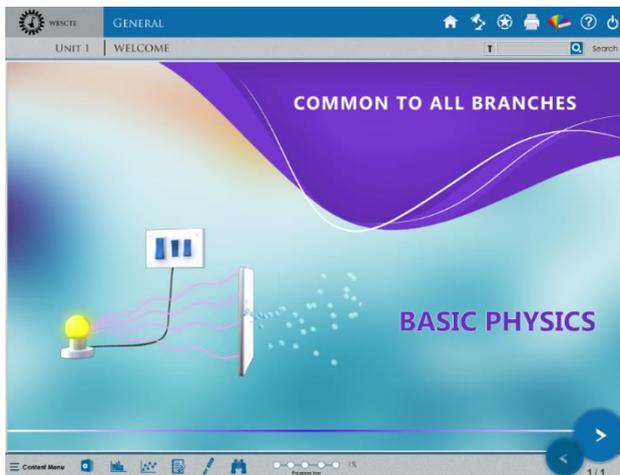
+91 44 4564 5656 | +91 44 4201 6101

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CLICK HERE TO PROCEED



12. The above figure shows a Home panel tools which has options to view Course Objectives, Syllabus, Reference Books, 3DM Classroom - Profile, Direct Access to Content/Demonstrations, Bookmarks, 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 Proceed or the close button.



13. This product is best to be viewed in 1024 X 768 resolution in monitor (Please check your display settings) and if Projector is used to view, then set the aspect ratio 4:3 or contact your administrator.
14. When settings are made for viewing in projector (4:3) you may find empty space on either side of your monitor, which is normal. Do not change the settings, this will enable best viewing in the projector/monitor.

### III. Instructions for the User Interface:

**3DM CLASSROOM - TYPICAL USER INTERFACE**

The screenshot displays the 3DM Classroom interface for a lesson on light. At the top, there is a navigation bar with icons for Home, Full content Displayer, Bookmark, Print, Colour, and Help. Below this is a search bar and a 'Search option' button. The main content area is titled 'UNIT 4 | 2.3 TOTAL INTERNAL REFLECTION AND CRITICAL ANGLE'. The lesson title is 'Total internal reflection and Critical angle'. A definition states: 'Critical angle: When a light ray passes from a denser medium to a rarer medium, the angle of incidence for which the angle of refraction becomes 90° is called Critical angle.' Below the text is a diagram showing a horizontal interface between a 'Rarer medium' (top) and a 'Denser medium' (bottom). Three rays originate from the interface: ray 1 is incident from the denser medium at an angle  $i$  and refracts into the rarer medium at an angle  $r$ ; ray 2 is incident at the critical angle  $c$  and refracts along the interface (90 degrees); ray 3 is incident at an angle  $i > c$  and undergoes total internal reflection back into the denser medium at an angle  $r$ . A '3d/2d video' icon is present next to the diagram. To the right of the diagram is the caption: 'Fig 2: Critical angle'. Below the diagram is an 'Explanation' section with a bullet point: 'When a light ray passes from a denser medium to a rarer medium it is bent away from a normal'. The bottom of the interface features a 'Content Menu' with icons for Home, Progress bar (3.37%), Pen, Zoom, and Direct Access to Content. A 'Direct Access to Demonstrations' button is also visible. On the far right, there are 'Previous Button', 'Next button', and 'Page Status' (4/7) controls.

## HOME PANEL TOOLS

### 1. COURSE OBJECTIVES

Clicking on this will lead to course objectives page.



### 2. SYLLABUS

Clicking on this, Syllabus page will be displayed.



### 3. REFERENCE BOOKS

User will get List of Reference books for the particular subject.



### 4. (DAC) DIRECT ACCESS TO CONTENT

Click on this to see all the chapter title pages under every Unit.



### 5. (DAD) DIRECT ACCESS TO DEMONSTRATIONS

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



## 6. VIEW BOOKMARKS

User can view all the bookmarks added.



## 7. 3DM CLASSROOM - PROFILE

Brief profile about 3DM Classroom and its features.



## 8. HELP

User can view the User Manual for easy usability of the User Interface.



## 9. ACKNOWLEDGEMENT

Contributions of various Subject Matter Experts (SMEs) of 3DM Academic Council, internet sources & Books are gratefully acknowledged and recognized.



## 10. CONTACT

It displays the contact information of the company.



## 11. TOOLS

### 11.1 FULL CONTENT DISPLAYER (ON/OFF)



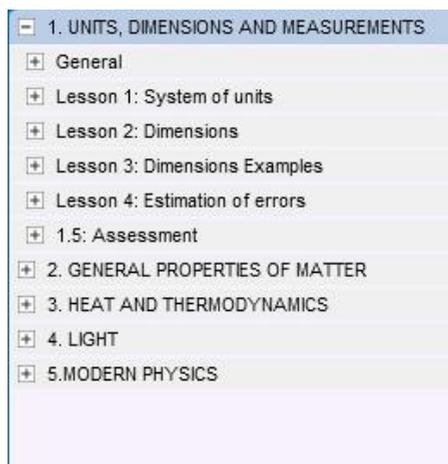
Using this option, all the content will be displayed at once rather than Click by Click.

### 11.2 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.

#### ☰ Content Menu



### 11.3 DIRECT ACCESS TO DEMONSTRATION

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



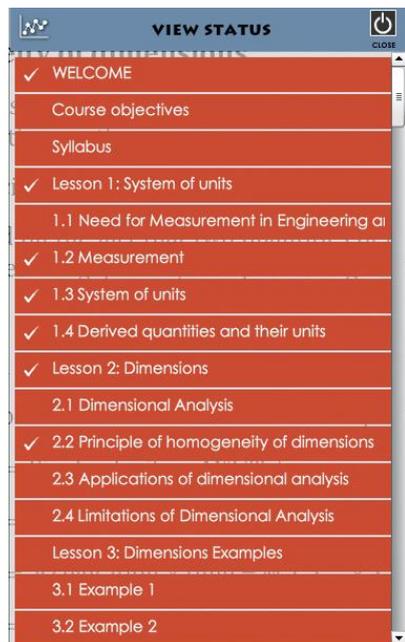
### 11.4 DIRECT ACCESS TO CONTENT

To see all the chapter title pages under every Unit.



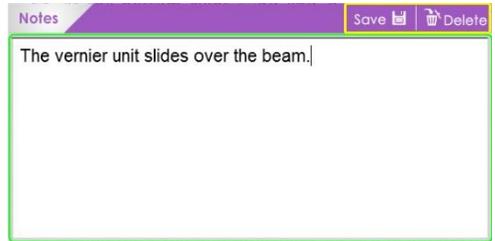
### 11.5 VIEW STATUS BAR

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”.



## 11.6 NOTES

Click on notes enables notepad for the faculty to add additional notes which could be saved and retrieved when required.



## 11.7 PEN

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

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



## 11.8 ZOOM

Click-On zoom to choose your desired option to maximize or minimize the content text.



- Zoom In
- Zoom out
- Actual Size



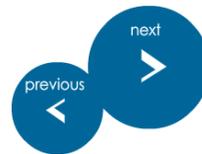
### 11.9 PROGRESS BAR

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



### 11.10 PAGE NAVIGATION TOOL (PERVIOUS / NEXT)

Use left / right arrows to change page to pervious or next. Alternately the left and right arrow keys of the system keyboard could also be used.



### 11.11 BOOKMARK

User can bookmark their desired topics or pages for future reference.



### 11.12 PRINT

For printing specific topic or page.



### 11.13 COLOR PALETTE

Allows to choose background color for the Header bar.



### 11.14 HELP

User can view the User Manual for easy usability of the User Interface.



### 11.15 SEARCH

#### Search by Text:

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



#### Search by Video:

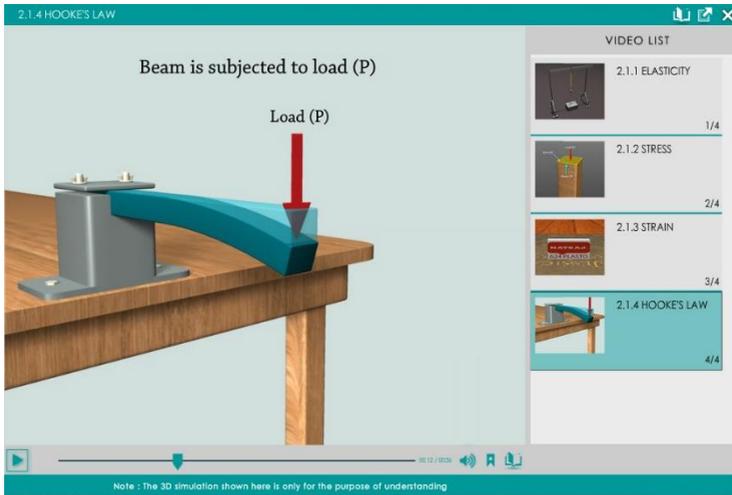
Search with keywords to view desired videos.



## 12. 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.

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



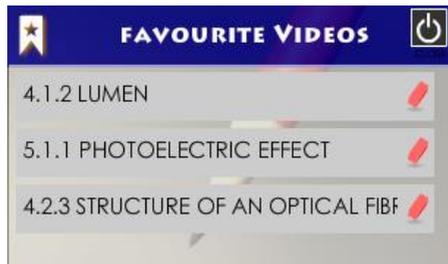
- Used to Bookmark the videos.



- Bookmarked/Favourite videos will be listed.



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



- To maximize & 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.



### 13. CONTENT DISPLAY

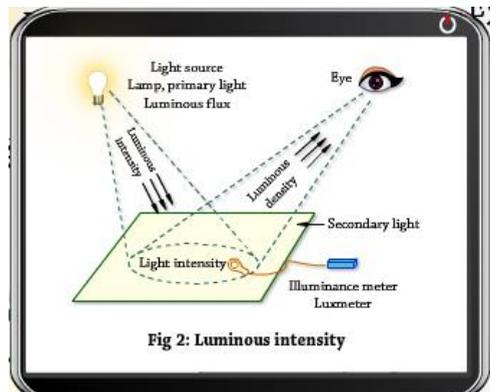
For every click, the contents will be displayed line by line until the end of the page which will be denoted by "page end" symbol.

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 --**

### 14. 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.



### 15. PAGE STATUS

Shows current page number and total number of Pages.

3 / 6

### 16. CLOSE / QUIT

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



## IV. Help Desk

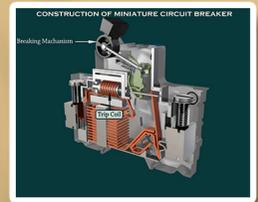
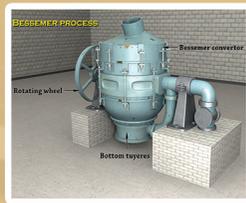
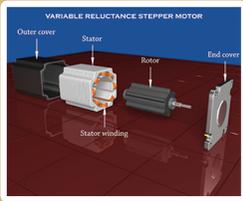
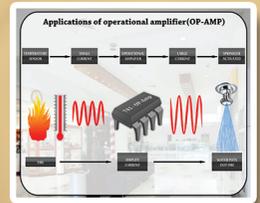
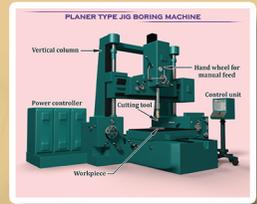
**3DM Classroom** support team is committed to provide support services to ensure that the products and services are up and working all the time.



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Visual-rich accelerated  
 Technical Education & Skill Development  
 Generating Industry-Ready youth



The way towards Youth Empowerment



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<https://twitter.com/3dmclassroom>

<http://www.youtube.com/user/infoplus3dmclassroom>

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