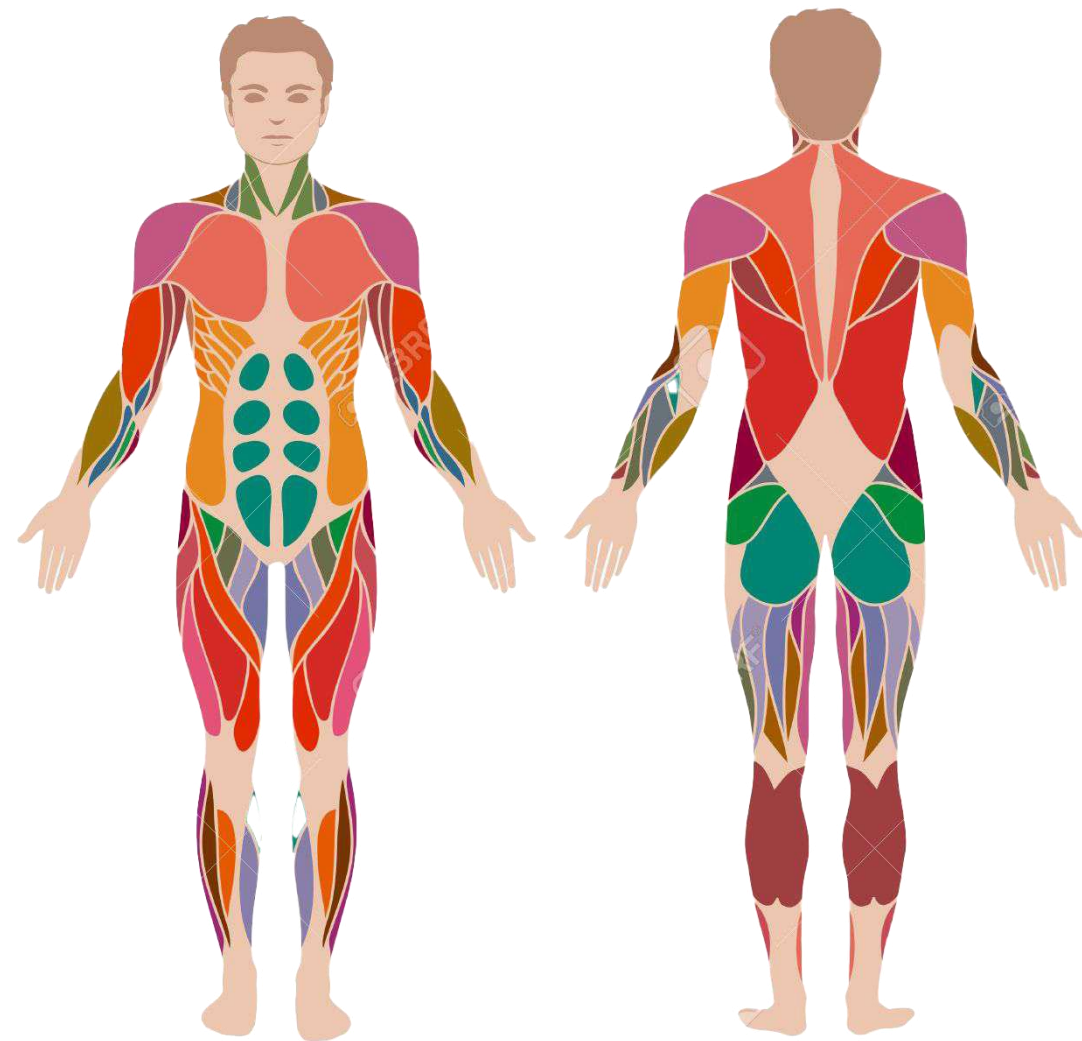




medisys.

Online and blended delivery of UG and Continuing Education for the health sector

Distinctive products and services from Medisys



- Digital teaching and learning aids to comprehensively support outcome based healthcare education.



- **Medicine:**
All didactic lectures/notes, including vital references to horizontal/vertical integration elements, lab/DOAP sessions, materials for small group discussions, skills development basics, bedside clinics, etc. Meets requirements of self directed learning. Systems to support teachers in all aspects of curriculum administration.



Medical and Allied Health Education:

Context for design of Medisys products and services

Deficit of good teachers:

To meet requirements of existing colleges as well as planned expansion in certain regions (new institutions, increasing annual enrolments). Content packs and LMS that facilitate varied online blended academic sessions

Heterogeneous classrooms: The need to provide efficient, effective remedial and supplementary education for weaker learners, in important or 'difficult to master' subjects/skills. Intensified support for assessment and practice readiness

Deficit of pedagogy for a new generation of students:

Visuals, text, speech integrated into a dynamic new composition, seamlessly connecting horizontal and vertical integration elements as also related exercises and lab sessions, etc.

Need for more consistent standards:

The teaching, learning and assessment of all that matters in colleges of different vintage, geographies and constitution. Sharp differences presently, between rural/urban, new/old and Government/private colleges (on average)

An acute need for accelerated human resource development

Seamless transitions:

Online, campus, lab, field site and hospital – learning happens everywhere
Can an LMS and an assessment system follow you seamlessly?

Interdisciplinary learning:

Professional practice requires agile, timely, interdisciplinary exposure and study. Content design and ICT may be critical to this

Learning through deliberation and doing:

We recognise this is vital, and our SGD, modules on clinical reasoning development are important contributions that can facilitate this

Live and up to date:

So much is changing so fast.
Is this a system geared to capture and reflect changes in laws to clinical practice, innovations, and therefore changes in curriculum promptly?

Across the spectrum, efficiency and acceleration in scaling up capacities, resilience in difficult times

Our Purpose

Our purpose is to make an impact on learning outcomes, enrolment numbers, and costs of delivering quality medical and allied health education, particularly in underserved regions.

There are innovative ways to design and package content constituted as per a curriculum, and to support most of the complex group or individual exercises and assessments that form the bedrock of the knowledge and cognitive components of medical education. The idea is to do this across the world, to reach out to geographies that have a deficit of good teachers and capital, and to fuse this aspect of our product/service design with new thinking around how the tactile components can be added via labs/skill development centres and available hospitals. The idea is also to use ICT extensively to achieve important aspects of the design objectives. Health systems in many parts of the world are in need of swift increase in qualified staff, and disruptive ideas and smart execution are very much required. MediSys represents one possibility.

The Product

Medisys Products and Services Can Potentially Touch Many Stakeholders

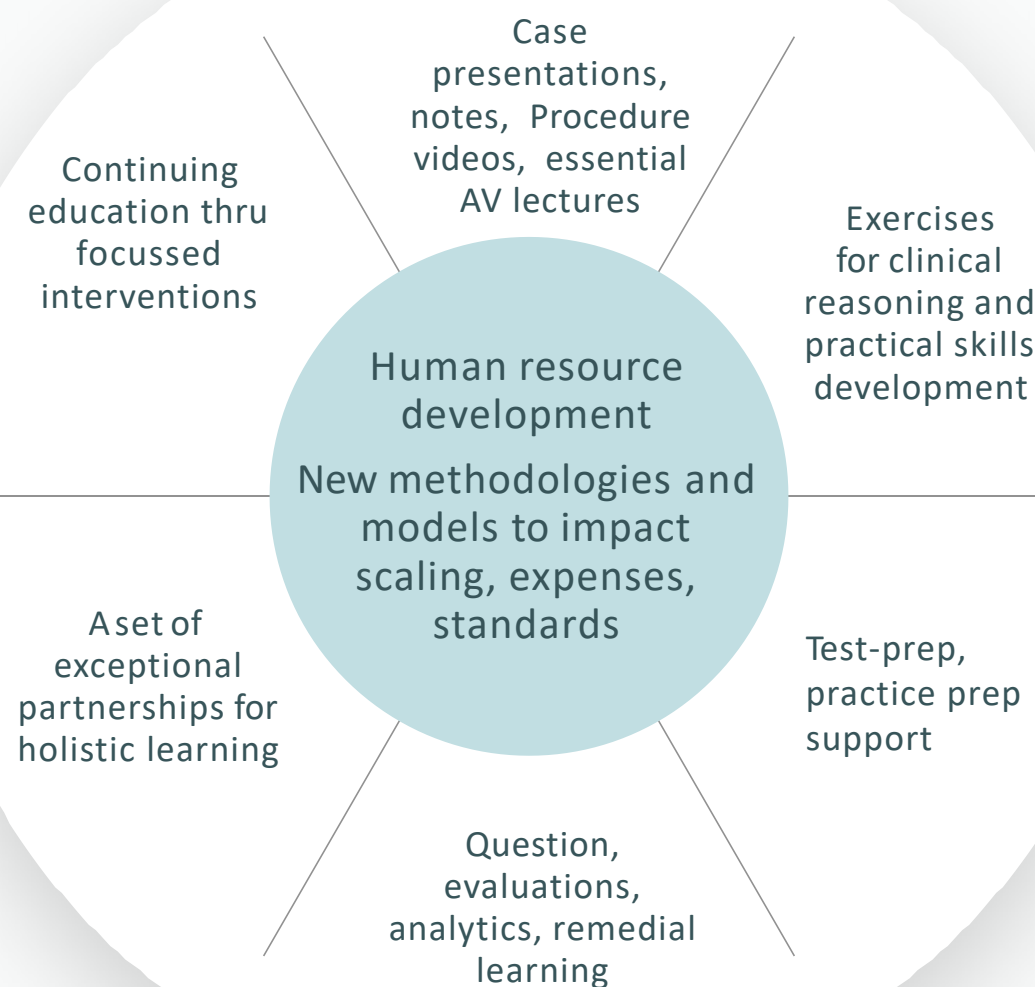
For Employers:
continuing access to well-educated and trained health workers



For Lenders, Investors in Education:
efficiency, resilience and sustainability



Teaching Faculty



Students



For Regulators:
enhanced assurance of meeting all non-negotiable standards

Contributors / Reviewers, Hospitals in an enlightened partnerships



For Governments:
an opportunity to build an adequate healthcare workforce swiftly, inexpensively, and secure health outcomes for all

The Product Portfolio



Undergraduate Education

An expanding range of undergraduate programmes covering all the subjects and course work related to all aspects of the curriculum.

An option to avail live online teaching/exercises by way of remedial/supplementary education



Continuing Medical Education

- Case intensive, practical and succinct.
- Review, refresh, update
- Courses designed for practice improvement, for better screening, surveillance and preventive care practices
- Primarily intended for op/family medicine practice.
- GP+ portfolio, with provisions for more curated learning experience

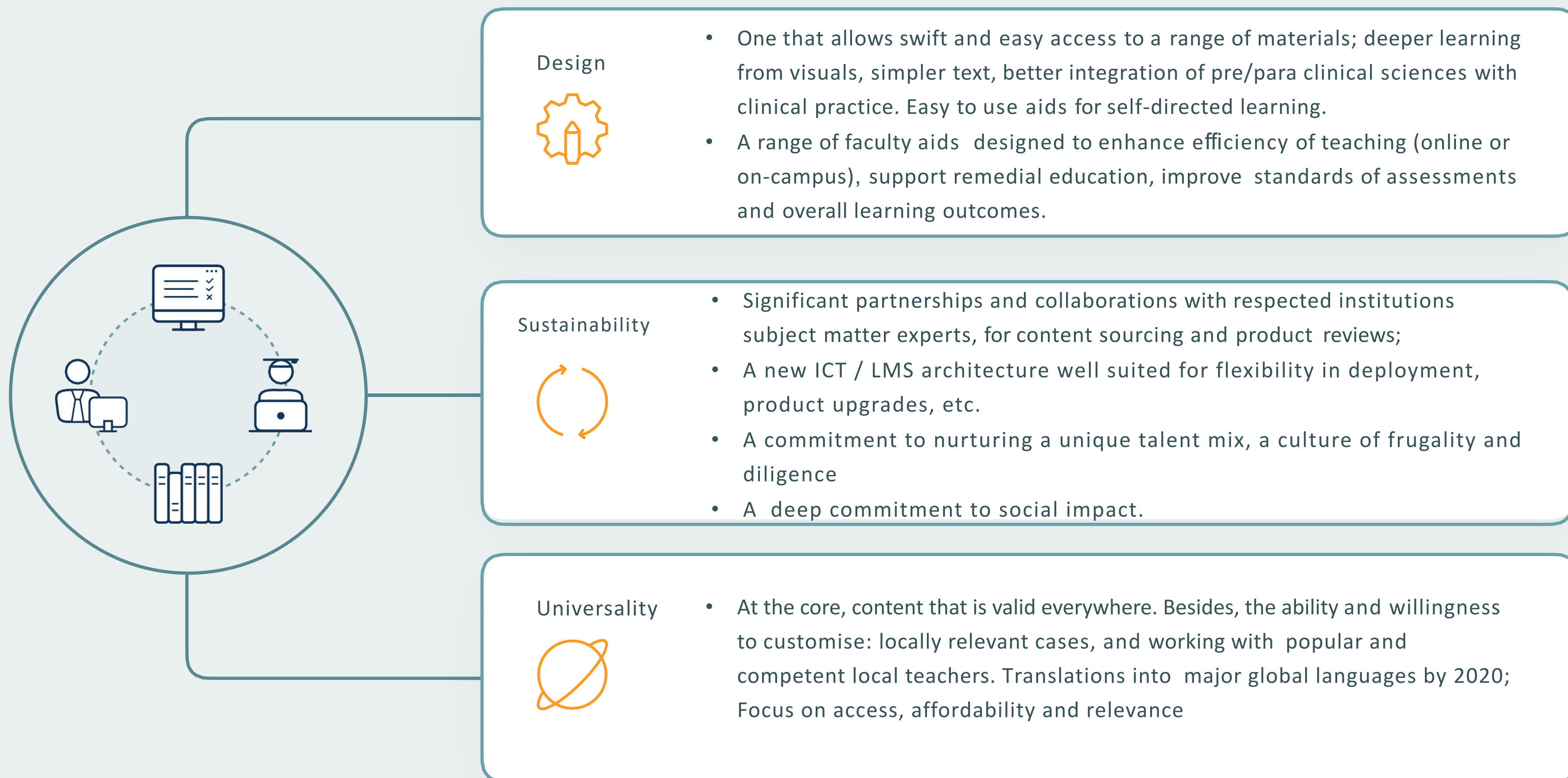


Test Prep, Assessments & Analytics

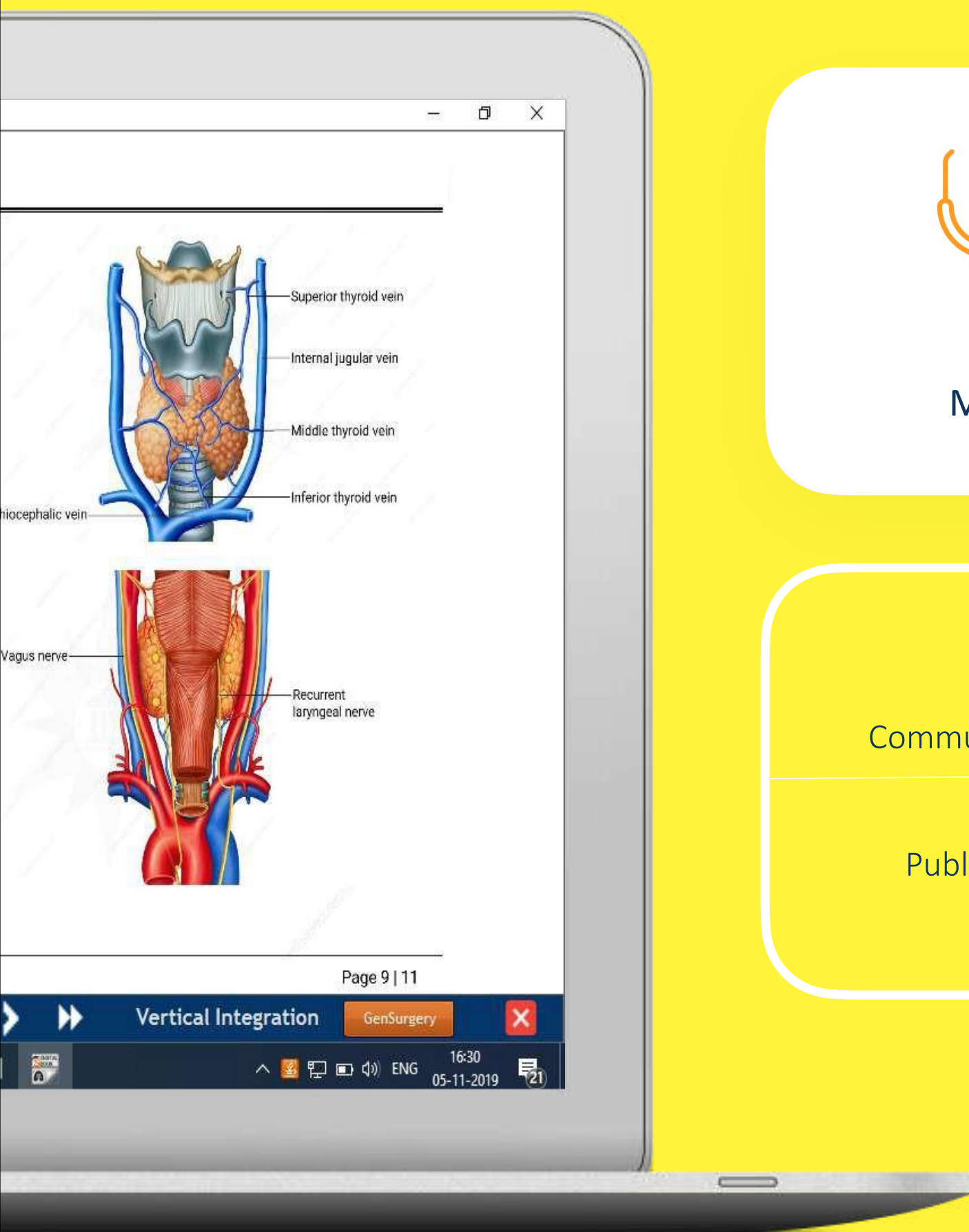
Succinct review material for exam preparation.

Condensed clinically oriented AV lectures, notes, a new set of books with a strong practice orientation, assessments and remedial education to sharpen key competencies in final year or licensing/exit exam

Distinctive Aspects of Product Development



The Product: Undergraduate Courses



Currently Offered (UG)



Medical



Dental



Nursing



Homeopathy

Upcoming Courses

Community Medicine

Public Health



Physiotherapy



Ayurveda



Pharmacy

Curriculum based, easy to deploy and use, richly illustrated and annotated, uniquely formatted for integrated learning

The Product: The Principal Format



Notes & Brief Explanations

Two Column Format

Range of Exhibits; Pictures, animations
Illustrations, Videos, Cases, etc.

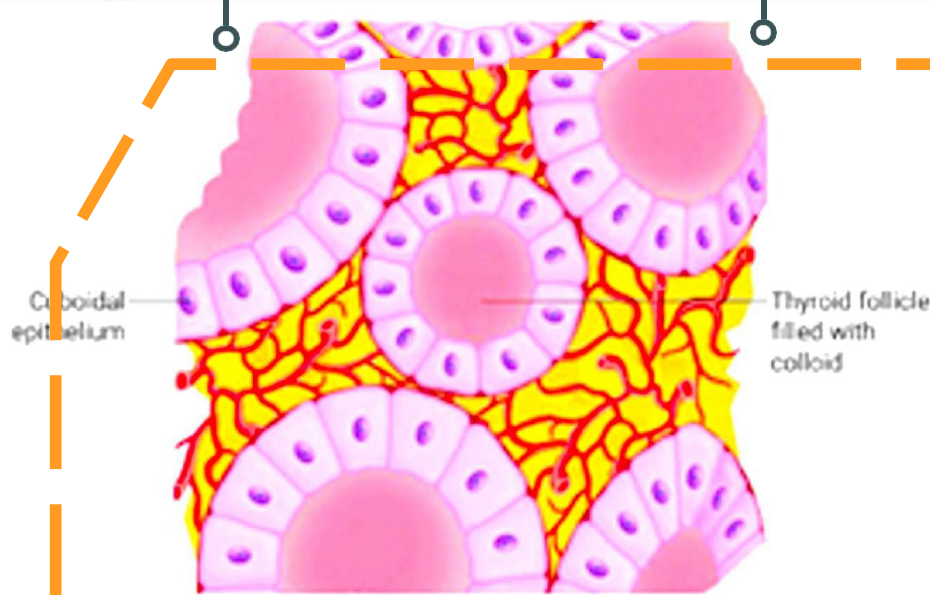
Digital Book Demo 1.2

Deep Structures in the Neck

Histology

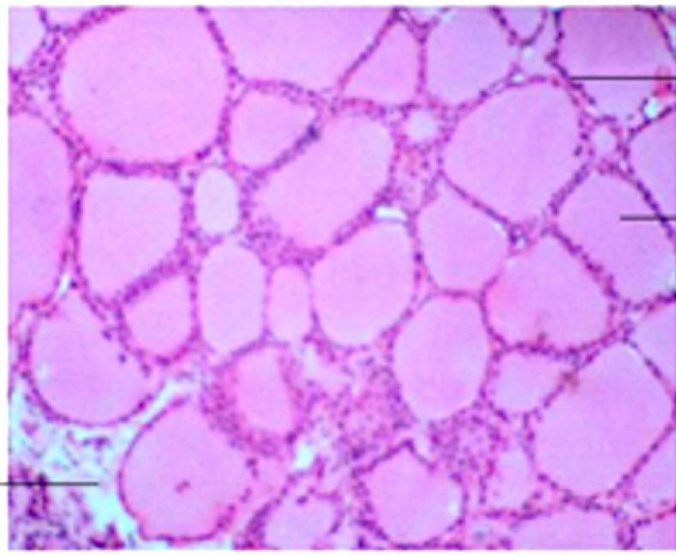
- Each lobe of thyroid gland is divided into various lobules by fibrous tissue septa
- Each lobule is made up of an aggregation of several follicles
- Each follicle is lined by follicular cells and parafollicular cells

| Feature | Description |
|-------------------------------------|---|
| | <ul style="list-style-type: none">Spherical follicles that selectively absorb iodine (as iodide ions, I⁻) from the blood for production of thyroid hormonesTwenty-five percent of all the body's iodide ions are in the thyroid gland |
| | the follicles, colloid serves as a reservoir of materials for hormone production and, to a lesser extent, act as a carrier for the hormones themselves |
| | It is rich in a protein called thyroglobulin |
| | es are surrounded by a single layer of thyroid epithelial cells, which secrete T3 and T4 |
| | When the gland is not secreting T3/T4 (inactive), the epithelial cells range from low columnar to cuboidal cells |
| | <ul style="list-style-type: none">When active, the epithelial cells become tall columnar cells |
| | <ul style="list-style-type: none">Scattered among follicular cells and in spaces between the spherical follicles is another type of thyroid cell, parafollicular cells, which secrete calcitonin. |
| Parafollicular cells (or "C cells") | |



Cuboidal epithelium

Thyroid follicle filled with colloid



Cuboidal epithelium

Colloid

Connective tissue

AN35.2

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AV Lectures SLOs Self Assessment

Horizontal Integrations Physiology Biochemistry Vertical Integrations General Surgery

Easy access to vital teaching / learning elements to comprehensively support the online / campus teaching

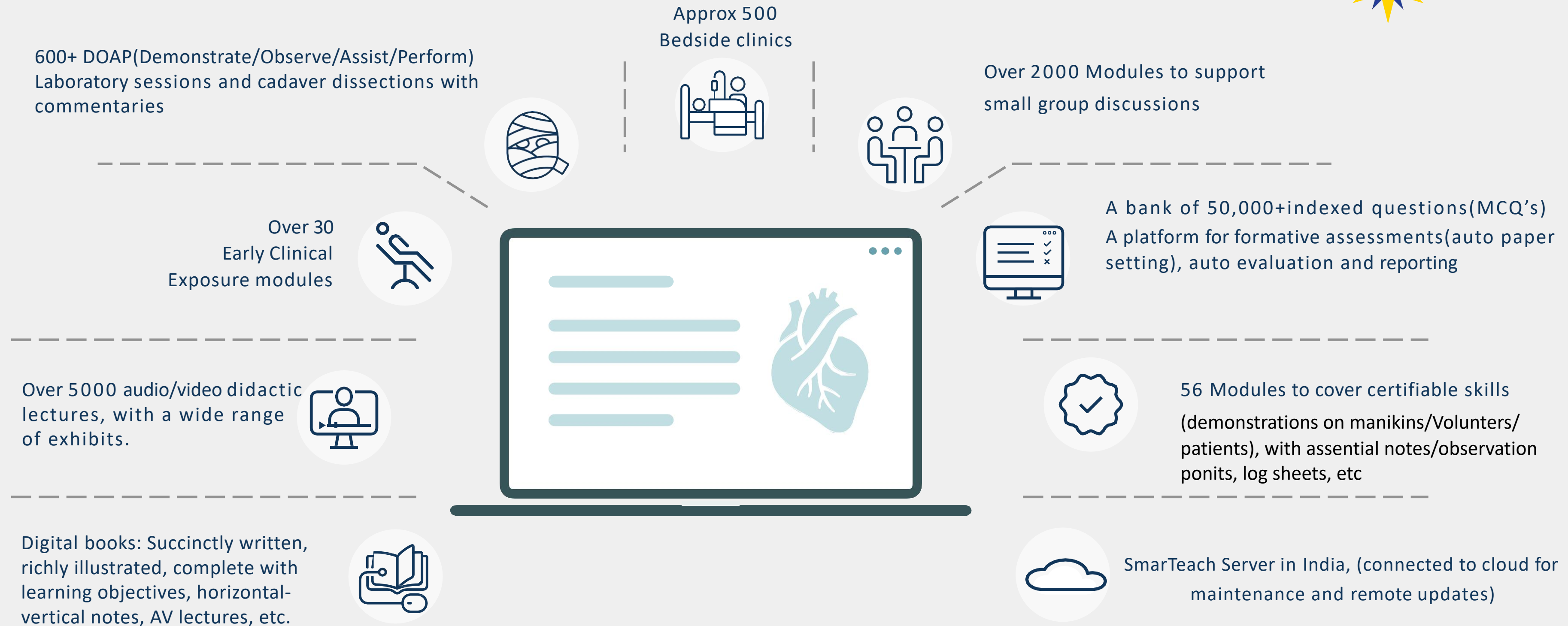
For the specific Learning Objectives competency numbered

MCQ'S for self assessment

Integration topics are succinctly presented with exhibits and text

Vertical Integration topics (Click Access)

The UG Medical Product: Components & Features



Comprehensive faculty assistance: navigate through subjects and topics as the curriculum/time table requires, anchor an online class in shared materials, use exhibits/ integration notes to explain better. Use of audio-visual lectures for supplementary /remedial education; run formative/summative assessments with ease.

Conduct small group discussions with cases/puzzles/tasks provided with contextul notes, exhibits and facilitator guidelines as and when necessary.

Self directed learning: Succinct but comprehensive text, audio-visual sessions with all learning elements and self/supervised assessments. Ideal for both self learning as also for small group learning.

Exam prep sessions, mock assessment in exam environments, automated evaluation, performance analytics, remedial education

The Product: UG Dental Key Features



The Product: UG Dental Key Features

Two column format:
Notes and brief explanations alongside range of exhibits (pictures, videos, illustrations, etc.)



Acrylic Resins

Compression-Molding Technique

- The polymer – monomer is mixed in a ratio of 3:1 by volume in a mixing jar. Polymerization shrinkage of methyl methacrylate is 21%. This is reduced to 6% by pre polymerized particles present in the powder
- The stages through which the mix passes are
- Sandy stage, stringy stage, dough stage, rubbery or elastic stage, and the stiff stage
- Polymerization is an exothermic process. The polymerization cycle used can be a long curing cycle of 74°C (165 f) for 8 hrs with no terminal boil or a short curing cycle of 74°C (165 f) for 2 hrs with terminal boil 100°C for 1 hr
- The flasks are allowed to bench cool for 30 min or cooled under tap water for 15 min before deflasking, to avoid warpage of denture material

Exhibits:

- A:** A green wax block being prepared.
- B:** A green wax block being placed into a mold.
- C:** A green wax block being prepared.
- D:** A green wax block being placed into a mold.

Objectives:

- Packing of Heat:**
- Objectives:**
- Ch Curing:**

Dental Materials

AV Lectures **SLOS** **Self Assessment**

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Launches

Learning objectives

MCQ's for self assessment

Audio-video lectures (integrated into the digital books)

An exhaustive compilation of richly illustrated AV lectures set to curriculum

Exhibits (images and videos) embedded into the digital books.

The Product: UG Nursing Key Features



Audio-visual Lectures

- Delivered by Subject Matter Experts. Enhanced using illustrations, animations, line diagrams, charts, etc. Questions at the end of chapter/topic for self assessment.
- Covers the entire theory/lab curriculum of BSc Nursing



Digital books/notes(to go with Audio-Video lessons compilation)

- Brief notes alongside a range of corresponding exhibits (animations, charts, line diagrams, images, videos, etc.).integration elements
- Questions at the end of each lecture/set of sessions for internal assessments and classroom discussion. Automated or manual assessment options



Nursing Procedures

- Cover a wide range, both basic and specialized procedures recorded on patients/volunteers/manikins
- Also included are various diagnostic tools such as radio graphic films/ images, practical guidance, insights. Investigation reports, ECG graphs, scan reports, etc. of various patients and contexts.
- Continuous additions/improvements
- Deployment in a library or for classroom instruction,also for student self learning and revisions



Care Plans

Exhaustive care plans, with specialised and department/ system wise coverage of all important aspects of nursing there in.

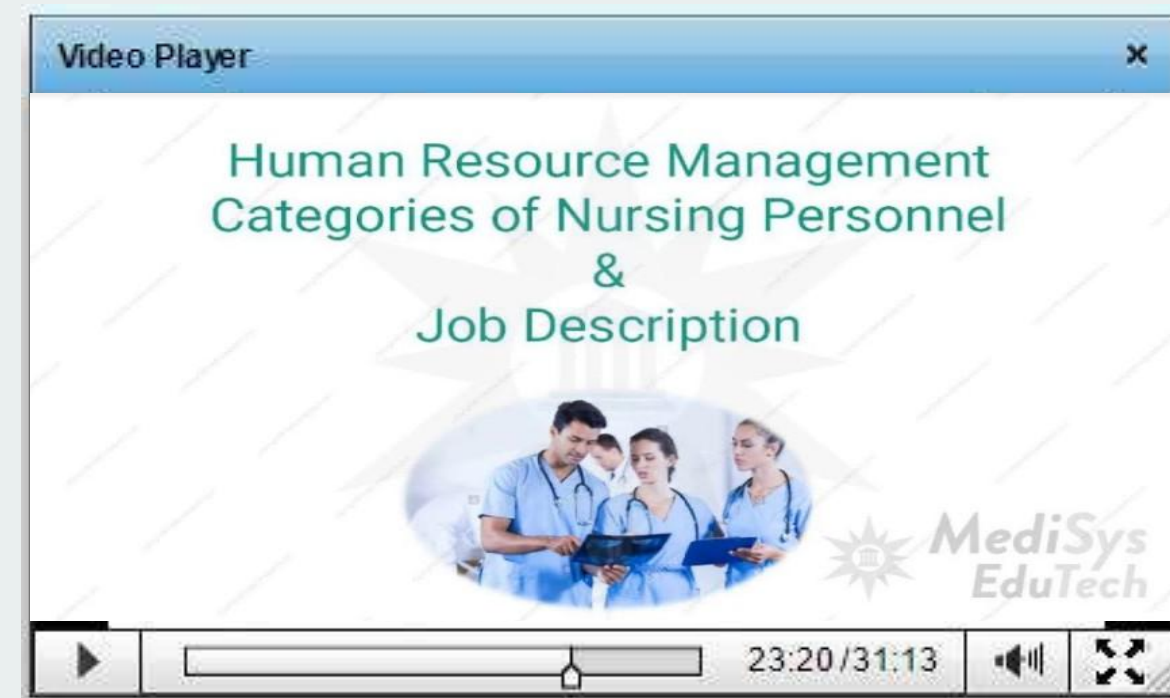


The Product: UG Nursing Key Features



Two column format:


Notes and brief explanations alongside range of exhibits (pictures, videos, illustrations, etc.)



Unit - III: Management of Nursing Services in the Hospital and Community
Standard Norms and INC Nurse-Patient Ratio (1985)

The norms based on hospital beds are

- Chief nursing officer - 1:500 beds
- Nursing superintendent - 1:400 beds or above
- Deputy nursing superintendent - 1:300 beds and 1 additional for every 200 beds
- Assistant nursing superintendent - 1:100-150 beds or 3-4 wards
- Ward sister - 1:25-30 beds or 1 ward 30% leave reserve
- Staff nurse - 1 for 3 beds in teaching hospital in a general hospital, 1 for 5 beds in nonteaching hospital; 30% leave reserve
- 1 extra nurse for research function
- OPD and emergency - 1:100 patients
- ICU - 1:1
- For 250 beds, 1 infection control nurse



Learning Objectives

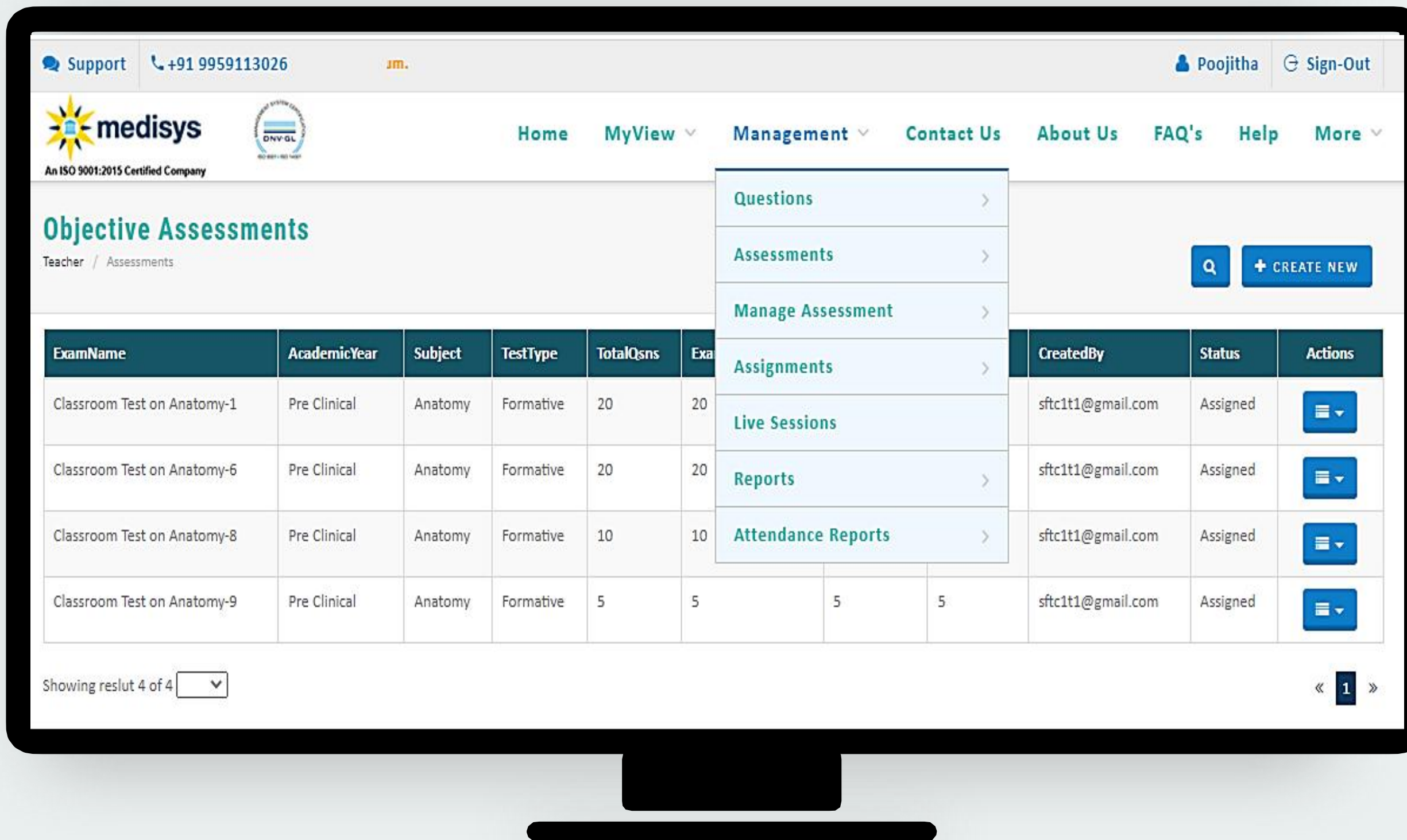
MCQ's for self assessment

Launches

Audio-video lectures (integrated into the digital books)
An exhaustive compilation of richly illustrated AV lectures set to curriculum

Exhibits (illustrations and animations) embedded into the digital books.

The Product: Distinctive Features of Medisys Learning Management System



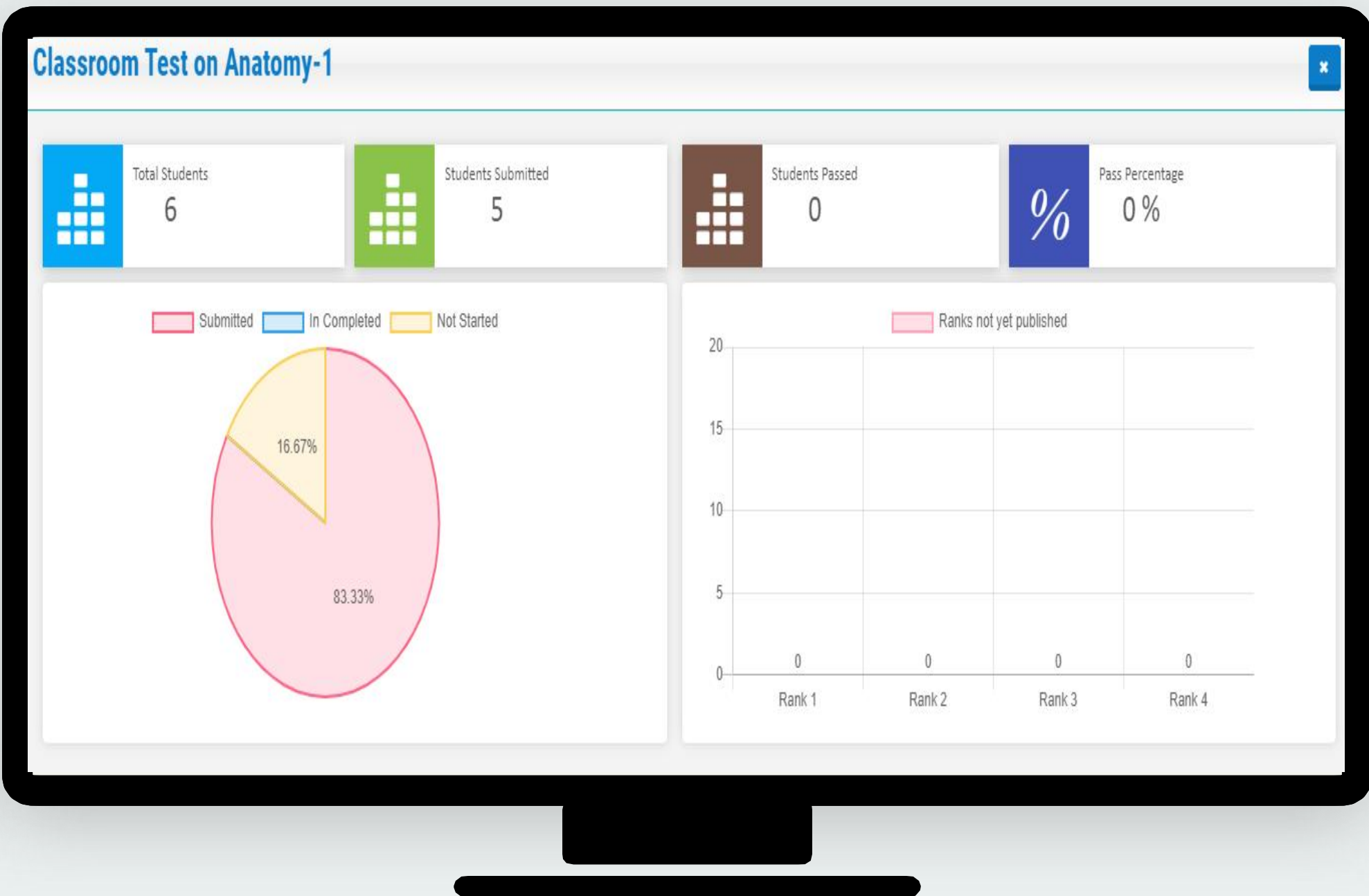
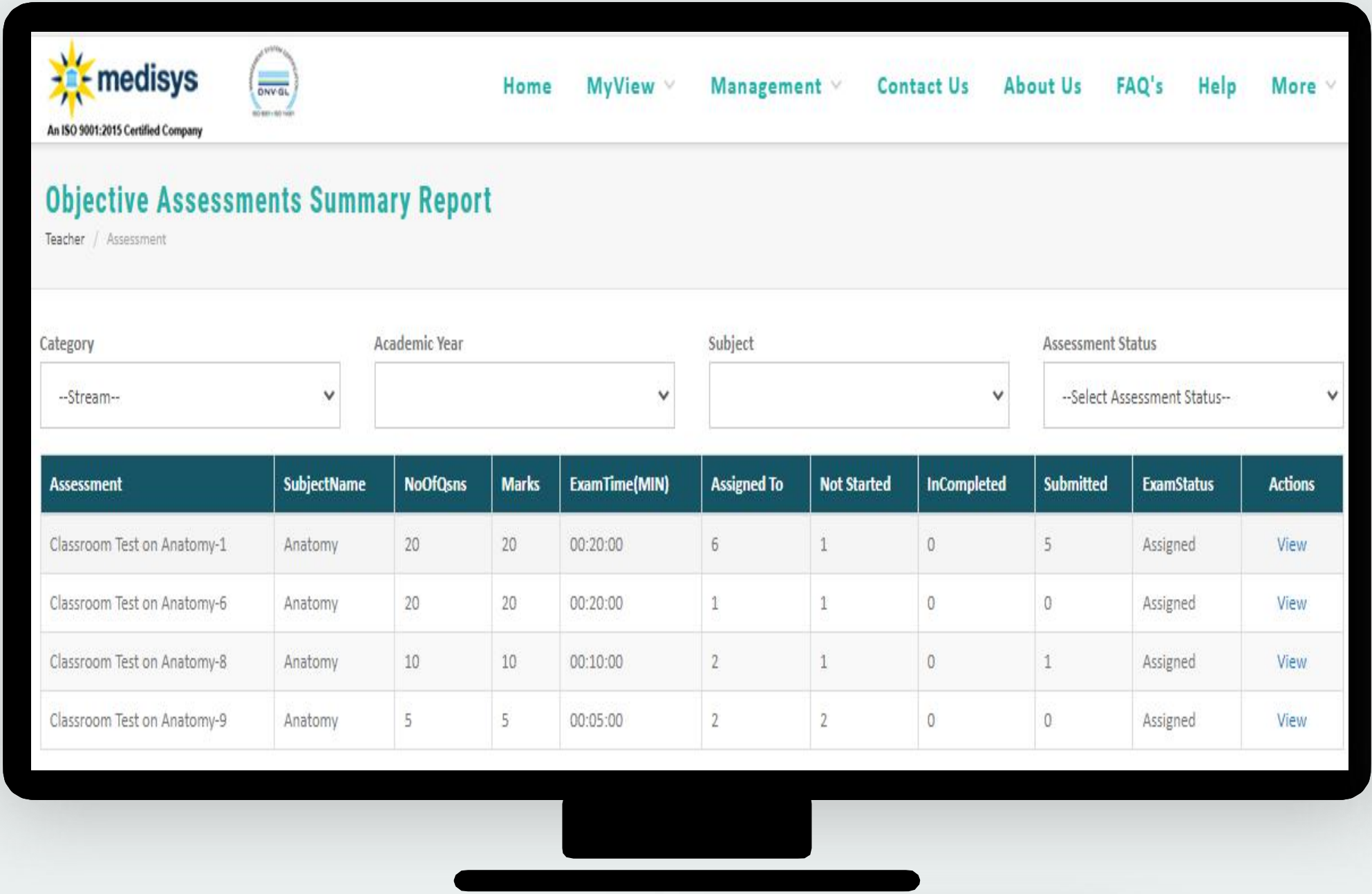
Learning Management System
For Institutions



Distinctive Features

- Online instruction: In a small class, a teacher can share screens, write/draw on a pad, record attendance, conduct a test, or a group discussion. Send alerts, gather assignments, create records.
- A teacher can seamlessly use these functionalities for “online” to “on campus” contexts
- Medisys has an extensive question bank, and each question is indexed (nature of question, level of difficulty, etc.)
- A teacher can select questions or ask for a system generated question paper, composed as per terms set by himself/herself.
- While evaluation of MCQs is automated for questions drawn from the bank, descriptive answers require a human standby. This is facilitated for online use

Indexed questions, auto composition of question papers, online proctoring, auto evaluation and performance dashboards



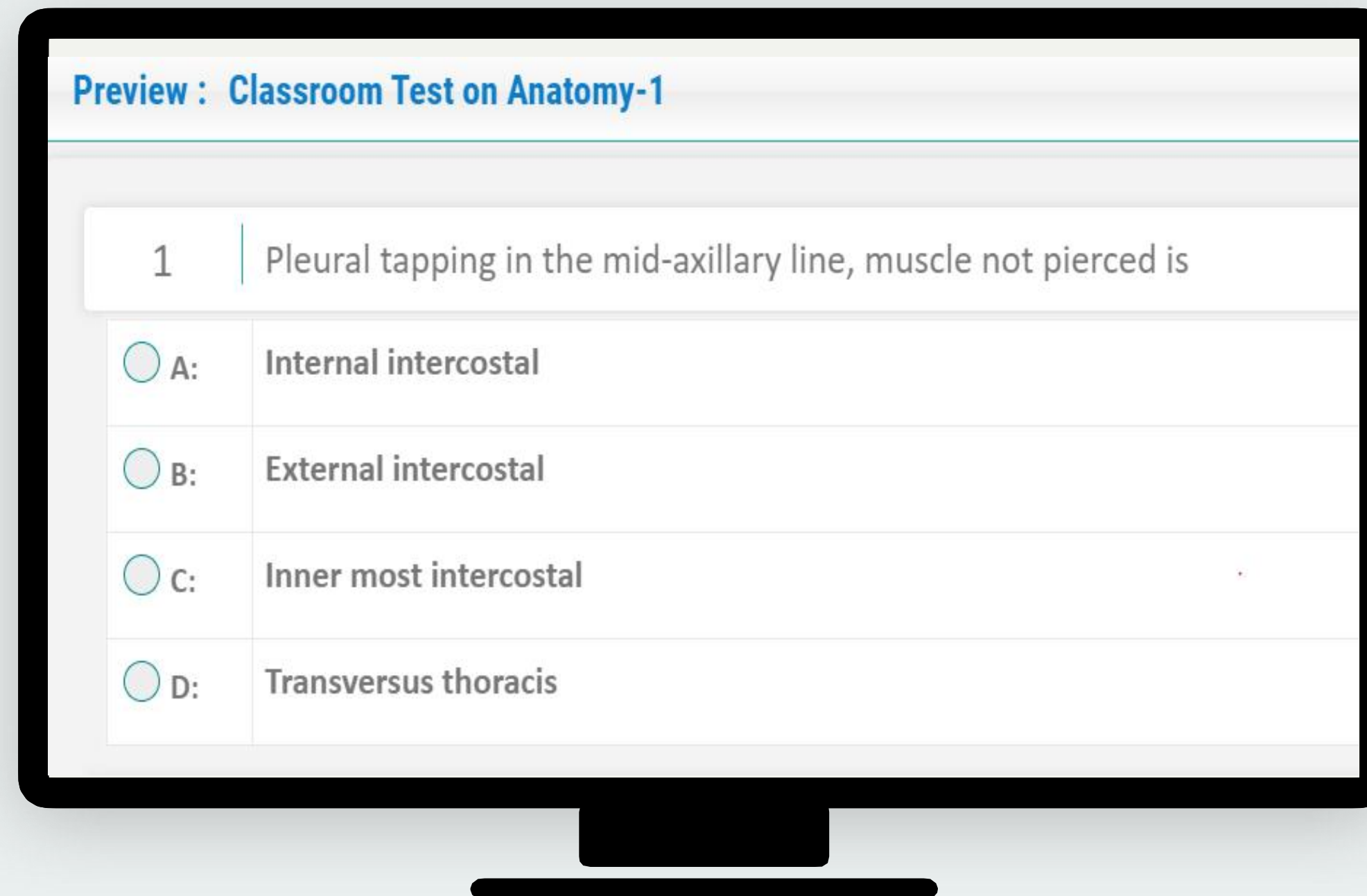
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A comprehensive assessment management system for institutions

TestPrep and Assessments:



- Self-assessment after each topic
- College/institutional assessment based on indexed questions.
- Essential automation support(composing questions papers based on different parameters, distribution as intended submissions, evaluations, reporting, etc.
- Mock assessments: of exit equivalence exam, performance analytics.



- Longer duration, part time courses, in online / blended formats – practice improvement for the GP, practice readiness for the new graduate.
- Our focus thus far has been on family medicine practice/besides essential dental, nursing and allied health review courses.

- Exposure to new cases
- Reviews & Updates
- Screening surveillance and preventive care
- Family medicine, out patient, primary care focus,
- Assignments
- Assessments

Courses in Allied Health subjects,practices

These courses are crafted for people serving the healthcare sector directly or indirectly. Covering topics like health insurance, blood bank management, laboratory medicine etc, it aims at inculcating the basic know-how and fundamental proceedings in these matters

1. Diploma in Emergency Medicine —1Year
2. Certificate in Primary Care Oncology —3 Months
3. Certificate in Primary Care Ophthalmology —3 Months
4. Certificate in cardio diabetes medicine —1Year
5. Certificate in Lifestyle diseases —6Months
6. Certificate in Primary Care Pulmonology — 6 Months
7. Diploma in infectious diseases —1Year
8. Pharmacology review for GP —3 Months
9. Certificate course in psychology and counselling skills for GP —4months
10. Certificate in Primary Care Dermatology- 6 Months
11. Certificate in Primary Care Oncology- 6 Months
12. Diploma in Hospital Mangement— 1 Year
13. STD and AIDS - 3 Months
14. Certificate in Blood Bank administration - 6 Months

Medisys Platform —Significant Advantages

- Universal access to standard, easy to follow teaching / learning materials, irrespective of location and context.
- Comprehensive faculty support in a classroom: notes and exhibits to cover the entire curriculum, materials and guidance to small group discussions, BSCs, assessments and analytics support; LMS and performance reports

- A greater sense of student engagement (active learning). Richly illustrated audio/visual sessions to cover all basic didactic teaching, succinct text support, labs and practical sessions for skills development, ECE modules, etc. Ideal for a new generation of students, important in lifting average performance quickly

- Swift incorporation of updates, corrections, additions. Localization / contextualization as required, Device / platform agnostic -Online delivery

Features built to support online education

Support for online teaching – Shared content helps in anchoring the online class better; fixing a framework, defining scope of coverage, time to complete a program, etc. and providing the same materials before and after the classes for revision and test prep.

Synchronous sessions (online or in campus): To clear doubts, to amplify some ideas and concepts, to run small group sessions, to conduct formative assessments, to provide feedback and mentoring.

MediSys provides all materials required for group exercises to the teacher, and sample materials to the student. Supported by guidelines and questions.

Basic didactic sessions in an asynchronous mode; students use digital books, pre-recorded lectures rich with videos, animations, line diagrams and pictures. Also comprehensive Audio-Visual lectures, lab sessions, ECE modules, etc.

New Possibilities

A Set of Short Courses for Vocational Skills

- A compendium of essential para medical,vocational courses for the health sector.
- Didactic audio/visual lectures,notes, exhaustive demos, presentation of equipment and consumables commonly used, procedures and best practices, reports and their basic interpretations, exercise routines, log books etc.
- Evaluation routines to track one's progessive advancement in the acquisition of a skill.
- Exhaustive guidelines for hospitals/clinics, and manikin- based skilling centers for the practice component.

Vocational Skills — Courses



- General Duty Assistants

- OT Technicians

- ICU/CCU Technicians

- Vision Technicians/Optometrists

- Anesthesia Technicians

- Pharmacy Assistants

- Triage-based Online Assistants

- Ambulatory Care Assistants

- Dialysis Technicians

- Dental Technicians

Multi purpose study centres/ surrogate ways for supplementary education and training

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- Medicine, Dentistry, Nursing, Physiotherapy, Community Medicine and Public Health
- Community Medicine and Public Health
- Medical Sciences(Pre-clinical and Para clinical Sciences)
- Continuing education sessions for various health professionals
- Essential Para Medical/Vocational courses
- Test/practice prep and mock assessments.

- They primarily rely on exceptionally well-constituted e-learning packages, supported by online realtime teaching from India. Study centre labs and small group exercises are viewed online, and prepared at the centres and hospitals/field postings near the school.
- Consequently, for lower need for a full contingent of faculty/support staff at each location . Asset investments and operating costs reduce drastically.
- On the other hand, the practical rigor of the programmes, the preparedness for licentiate exams and the readiness for a career in healthcare services rise significantly.
- Education will cease to be expensive, enrollment numbers will rise and underserved communities are better off.
- These centres should supplement/complement conventional colleges, and turn into regular college as and they regulatory approvals

Medisys Study Centres — Components



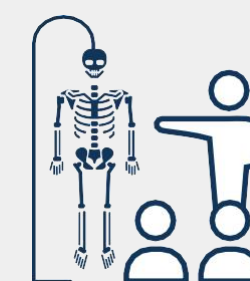
E Library/e library

- An e-library with atleast 50 PCs to support students who prefer to spend time in the centre's learning environment.



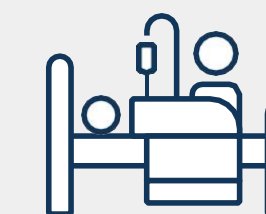
Classrooms

- MediSys content repositories for various courses are accessible via a local server in the classrooms and libraries.
- Tutors are trained to conduct case based group discussions, exercises of various kinds. MediSys provides all required materials to facilitate them.



Skill Development Centres

- Hands-on practice on mannequins and simulators for short courses as also UG courses
- Labs/ museums for anatomy, pathology, physiology, biochemistry, microbiology.



Admin(for hospital postings,counselling etc.)

- Tie-up with local hospitals (ideally co-locate a MediSys study centre in a large hospital).
- Structured real time training in small batches of college students, enrolled in various colleges.

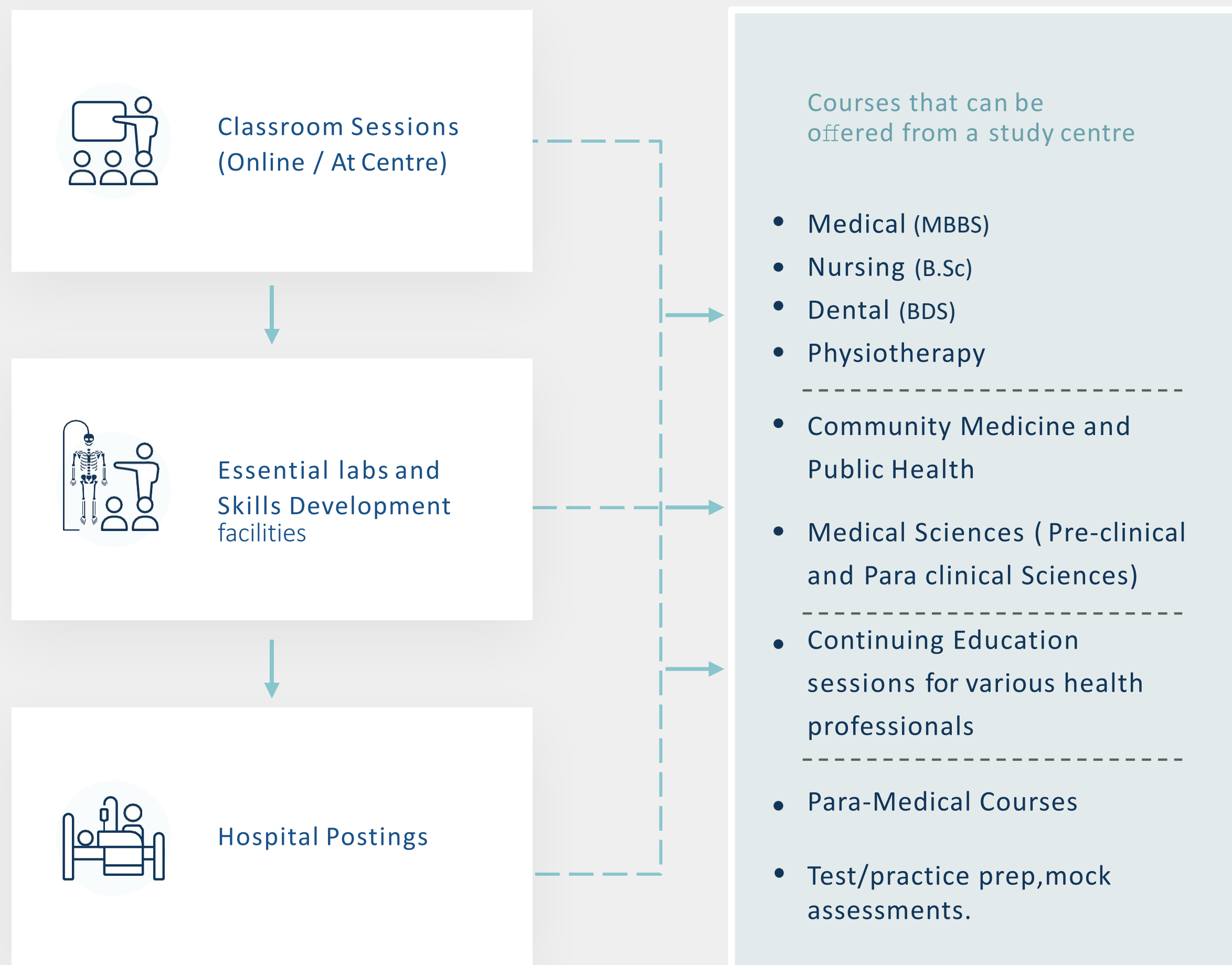
To create all these components, and to cater UG/CE to all the courses that can be offered

- The gross space requirement could be 30,000—35,000 Sq.Ft.,
- The investment needed of the order USD 6—7 Million.

Medisys Study Centres — Teaching and Training Approach



- Medisys materials help at every stage. Tutors make it easy to use online resources.
- All operating guidelines prepared by experienced academicians and practitioners, and include case sheets, log books, demo videos, etc.
- Center staff:
Fulltime teaching/practical support to go along side online staff, and
Packaged learning materials.



Thank You



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