

**Product Name :**  
Digital Learning Content And Software Package

**Product Code :**  
AutomobileLab0007



**Description :**

Digital Learning Content And Software Package

**Technical Specification :**

Classroom Management System (CMS) should be new generation of software that assists teachers in utilizing and managing a computer multimedia lab or 1:1 classroom. It transforms traditional classrooms into educational platforms which allow students to develop 21stCentury skills and teachers to manage an ICT rich classroom without compromising the way they naturally would like to teach. CMS should utilize cutting edge features which allow for a broad range of learning techniques and communication methods, while harnessing features such as screen spying, broadcasting, computer/screen locking, file sharing, and many more to maximize learning effectiveness in a 21st Century classroom.

**Specification:**

CMS should support additional apps which are able to be purchased directly from the website provider administrator. While, not a comprehensive platform, these apps help educators who want to bring specific 21stCentury Elements into the classroom. Examples of these apps are:

**Polling**

Using any device, teachers will be able to immediately poll their students to get real time responses and assessment.

**Digital Whiteboard**

Teachers can use their device to replicate many of the same features as a digital whiteboard at a fraction of the cost. Now a teacher can use ICT in their demonstrations with minimal infrastructure.

Exam Creation: Teachers can build exams for students using exam authoring tools Exam Dissemination:

---

Teachers can digitally disseminate exams to their students and retrieve them for automatic scoring.

**Compatibility:**

Windows 7  
Windows 8  
Windows XP  
Linux  
Android mobile devices  
Local- Not online and No Server Needed  
Devices Control Features  
Learner Monitoring Features  
Device Sharing Features  
Utility Features  
Learner Features Summary  
Administration  
Differentiated Instruction  
Learning Management System (LMS)

**Features:**

The LMS should be a comprehensive education tool designed to enrich courses by embedding digital Content and assessments into traditional teaching and learning. A full suite of content creation tools is included to enable instructors and instructional designers to enhance their courses with customized digital content. Scheduling, communication, and web 2.0 tools allow multiple options for students and instructors to meet the diverse needs of learners in the 21st Century.

The LMS should incorporate many instructor friendly features which enable complete course delivery or supplemental course materials. Instructors are able to design their own curriculum, modify content, and import SCORM compliant modules for students to view. Instructors have complete control over content, assessment and grading scales. The LMS content delivery system tracks individual students' progress as they are guided through technology rich curriculum, which enhances 21st Century Skill competency, in addition to ensuring students meet the required learning outcomes of the course.

The LMS should be a versatile learning platform which supports 21st Century learning models such as blended learning, and flipping the classroom. This flexibility enables institutions to create the most valuable learning opportunities possible and to maximize student capacity for independent learning.

**Specification:**

WEB 2.2 Tools  
Curriculum Development  
Instruction Design  
Content Delivery  
Automotive and Transportation Technologies

The Digital Content for Vocational Learning provides extensive courses addressing core TVET areas. This digital content should be designed to meet the needs of students in the 21st Century by giving them opportunities to learn in alternative ways, "anytime- anywhere". Content can be deployed on the Learning Management System or CD Rom. Elements of the content such as simulations or assessments can be deployed using the Classroom Management System for real-time learning with the content. In short, Digital Content for TVET should be designed to be used in a variety of situations.

**The package is inclusive of:**

Theory Presentations  
Animations of principles  
Simulations for exploration  
Videos of real systems

---

Lab Tasks for hands on exercises  
Investigations activities  
Quizzes to test students knowledge  
Assessments of learning objectives

**E-learning package contents:**

Basic Engine Fundamentals:  
Engine Fundamentals  
Petrol Engine Combustion Cycle  
Petrol Engine Components  
Diesel Engine Combustion Cycle  
Diesel Engine Components  
Diesel Engine Combustion  
Fuel Delivery System  
Engine Cooling System  
Engine Lubrication System  
Valve Trains

**Automotive Electrical and Electronic Systems**

Basic Automotive Electrical Circuits  
Ignition System  
Alternator  
Starting Motor  
Starting and charging Circuit  
Lighting Systems  
Electrical and Hybrid Vehicles  
Safety Restraining Systems (SRS)

**Air Conditioning and Heating Systems**

Automotive Air Con and Heating system

**Manual Transmissions and Axles**

Clutch System  
Manual Transmission

**Front Wheel Drive and Transaxles**

Front Wheel Drive Systems  
Four-Wheel-Drive Systems

**Automatic Transmissions and Transaxles**

Automatic Transmission Inspection and Refitting

**Propeller Shafts and Differential Gear**

Drive Shafts  
Differential and Rear Drive Systems

**Brake Systems**

Hydraulic Brake System  
Power Assisted Hydraulic Brake System  
Disc Brake System  
Drum Brake System  
Electronic Brake Systems  
ABS Procedures  
Traction and Stability Control

**Steering and Suspension Systems**

Road Wheels and Tires  
Wheel Geometry  
Steering System  
Hydraulic Power Steering Systems  
Electric Power Steering Systems

---

Suspension Systems  
Self-Levelling and Ride-Controlled Suspension

**Diesel Fuel Systems**

Fuel Delivery System  
Diesel Injection Pump  
Electronic Fuel Injection System, CDRI

**Petrol Fuel Systems**

Fuel Delivery System  
Fuel pumps  
Electronic Fuel Injection System, EFI

**Engine Management Systems**

Engine Speed Sensor System  
Idle Speed Sensor and Control System  
Engine Management System  
Exhaust Gas Emission Control

**Supplemental Materials**

Math for Technicians:

**Arithmetic, Fractions and Decimals**

**Indices, Factors, Algebra and Trigonometry**

Career and Employment Skills  
Workshop Safety and Accident Prevention

Science for Technicians:

Force and Energy  
Matter and Materials

The package should have software of 1 server License and 20 student license. Supplied complete with Hardware of 1 number server Computer of specifications: 4 core, 3.1 Ghz, 4Gb Ram, 1Tb Hard-disk, complete with Keyboard Mouse and Display minimum 15.6" with Windows 8 or Latest Windows Operating system. Supplied complete with 20 student laptops with Minimum specifications: Intel (or equivalent) i3 Display 15.6", 4Gb Ram Memory, 500 Gb hard-disk With Windows 8 or Latest Windows Operating System.

 **LAB ENGINEERING**

**Elab Engineering Equipments Manufacturers**