edibon

Engineering and Technical Teaching Equipment
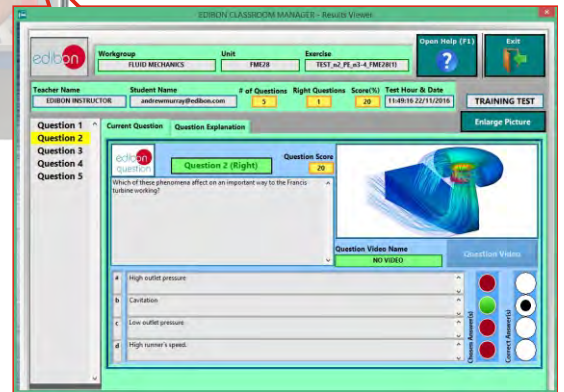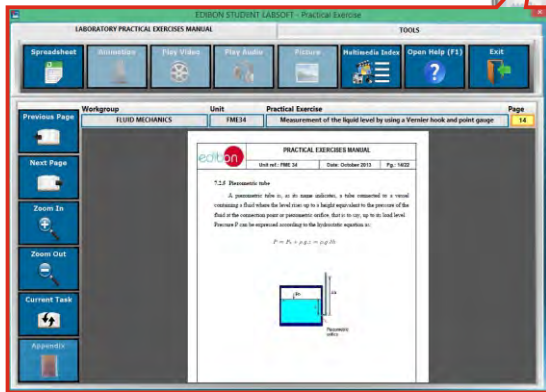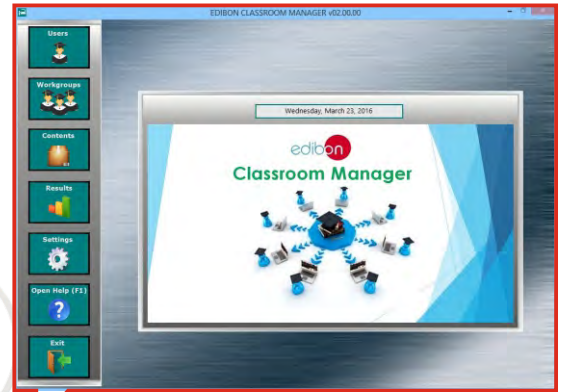
Innovative features: ICAI = ECM-SOF + ESL-SOF

POWERED BY

LabVIEW™

ECM-SOF. **EDIBON CLASSROOM MANAGER** (INSTRUCTOR SOFTWARE)

➤ User Data Base Management.

➤ Administration and assignment of Workgroups, Tasks and Training sessions.

➤ Creation and Integration of Practical Exercises and Multimedia Resources.

➤ Custom Design of Evaluation Methods.

➤ Creation and assignment of Formulas & Equations.

➤ Equation System Solver Engine.

➤ Updatable Contents.

➤ Report generation, User Progression Monitoring and Statistics.

ESL-SOF. **EDIBON STUDENT LABSOFT** (STUDENT SOFTWARE)

➤ Student Log-In & Self-Registration.

➤ Existing Tasks checking & Monitoring.

➤ Default contents & scheduled tasks available to be used from the first session.

➤ Practical Exercises accomplishment by following the Manual provided by EDIBON.

➤ Evaluation Methods to prove your knowledge and progression.

➤ Test self-correction.

➤ Calculations computing and plotting.

➤ Equation System Solver Engine.

➤ User Monitoring Learning & Printable Reports.

➤ Multimedia-Supported auxiliary resources.

Imp! With additional small cost, this system can be supplied in your language.

More details:
www.edibon.com/products/catalogues/en/ICAI.pdf

ISO 9001: Quality Management
(for Design, Manufacturing,
Commercialization and After-sales service)

C E
European Union Certificate
(total safety)

Certificates ISO 14001 and
ECO-Management and Audit Scheme
(environmental management)

Worlddidac Quality Charter
Certificate and
Worlddidac Member

What is ICAI Software?

ICAI incorporates E-Learning into the curriculum in response to one of the **instructor's** main tasks, providing the **students** the right tools to learn by themselves in the most efficient and painless way.

The ICAI, Interactive Computer Aided Instructor Software System, helps both the teacher and the students.

a) It helps the **teachers** by:

    a. Scheduling their classes and tasks easily.

    b. Checking in real time what any student is doing and enabling the instructors to teach faster and more efficiently.

    c. Supervising the students understanding progress and level, questions and answers as well as the whole class evolution.

    d. Ensuring more individual attention.

    e. Adapting the learning patterns.

    f. Reducing the preparation time for lessons.

    g. Teaching easily.

b) It helps the **students** by:

    a. Enabling them to understand the operation of any EDIBON Teaching Unit and the principles involved easily. This software can be used for all manual computer controlled EDIBON SCADA units.

    b. Providing them modern tools so that they are able to get clear ideas and quick understanding.

    c. Saving time.

Why ICAI Software?

Wide variety of **contents for any Area** (Electricity, Electronics, Fluid Mechanics, Thermodynamics…). These contents are divided into:

    a. <u>Practical Exercises</u>: Practical Exercises Manual & Multimedia Resources.

    b. <u>Tests</u>: **Two types of Evaluation Methods**: Training Test & Exams.

    c. <u>Calculations</u>: **Formula Packages related to the different Units** and a Spreadsheet tool to compute, compare and plot the results obtained in the laboratory and the theoretical ones. It also includes an **Equation System Solver Engine**.

    d. <u>Graphical Results</u>: **Custom Reports & Results**: Monitoring the Users & Workgroups progression.

Advantages of ICAI Software?

➤ **Start working from the first day**: EDIBON provides a huge variety of default contents & scheduled tasks available to be used from the first session.

➤ **Updatable Contents**: The provided material can be periodically updated.

➤ **Easy integration of own resources**: You can design/edit/remove your own contents & tasks.

➤ **Self-correction**: All tests are automatically evaluated by ICAI System Software.

➤ **Multimedia-Supported auxiliary resources**: Animations, Videos, Pictures, Audios, detailed Question Explanations and so on that can be shown to expand the student knowledge.

➤ **Printable Reports & Statistics**: Generate and export summarized information in different formats (**Tables, Histograms, Progression plots…**) related to the current status and results of the jobs planned for individual Users/Units/Tasks/Workgroups.

The **ICAI, Interactive Computer Aided Instruction Software System**, comprises the following programs: EDIBON CLASSROOM MANAGER (**ECM-SOF**) and EDIBON STUDENT LABSOFT (**ESL-SOF**).

ECM-SOF. **EDIBON CLASSROOM MANAGER** (INSTRUCTOR SOFTWARE)

ECM-SOF is the application that allows the Instructor to register students, manage and assign tasks for workgroups, create own content to carry out Practical Exercises, choose one of the evaluation methods to check the Student knowledge and monitor the progression related to the planned tasks for individual students, workgroups, units, etc... **so the teacher can know in real time the level of understanding of any student in the classroom.**

1. ECM-SOF. EDIBON Classroom Manager Software Application.

It includes the following Program Packages:

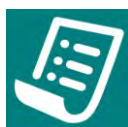**1.1 EUS. EDIBON Users Program Package.**
User Data Base Management.

1.2 EWT. EDIBON Workgroups & Tasks Program Package.
Administration and assignment of Workgroups, Tasks and Training sessions.

1.3 EPE. EDIBON Practical Exercises Program Package.
Creation and Integration of Practical Exercises and Multimedia Resources.

1.4 ETTE. EDIBON Training Test & Exam Program Package.
Custom Design of Evaluation Methods.

1.5 ECAL. EDIBON Calculations Program Package.
Creation and assignment of Formulas & Equations.

1.6 ERS. EDIBON Results & Statistics Program Package.
Report generation, User Progression Monitoring and Statistics.

ESL-SOF. **EDIBON STUDENT LABSOFT** (STUDENT SOFTWARE)

ESL-SOF is the application addressed to the Students that helps them to understand theoretical concepts by means of practical exercises and to prove their knowledge and progression by performing tests and calculations in addition to Multimedia Resources. Default planned tasks and an Open workgroup are provided by EDIBON to allow the students start working from the first session. Reports and statistics are available to know their progression at any time, as well as explanations for every exercise to reinforce the theoretically acquired technical knowledge.

2. ESL-SOF. EDIBON Student LabSoft Software Application.

It includes the following Program Packages:

2.1 EUS. EDIBON Users Program Package.
Student Log-In & Self-Registration.

2.2 EWT. EDIBON Workgroups & Tasks Program Package.
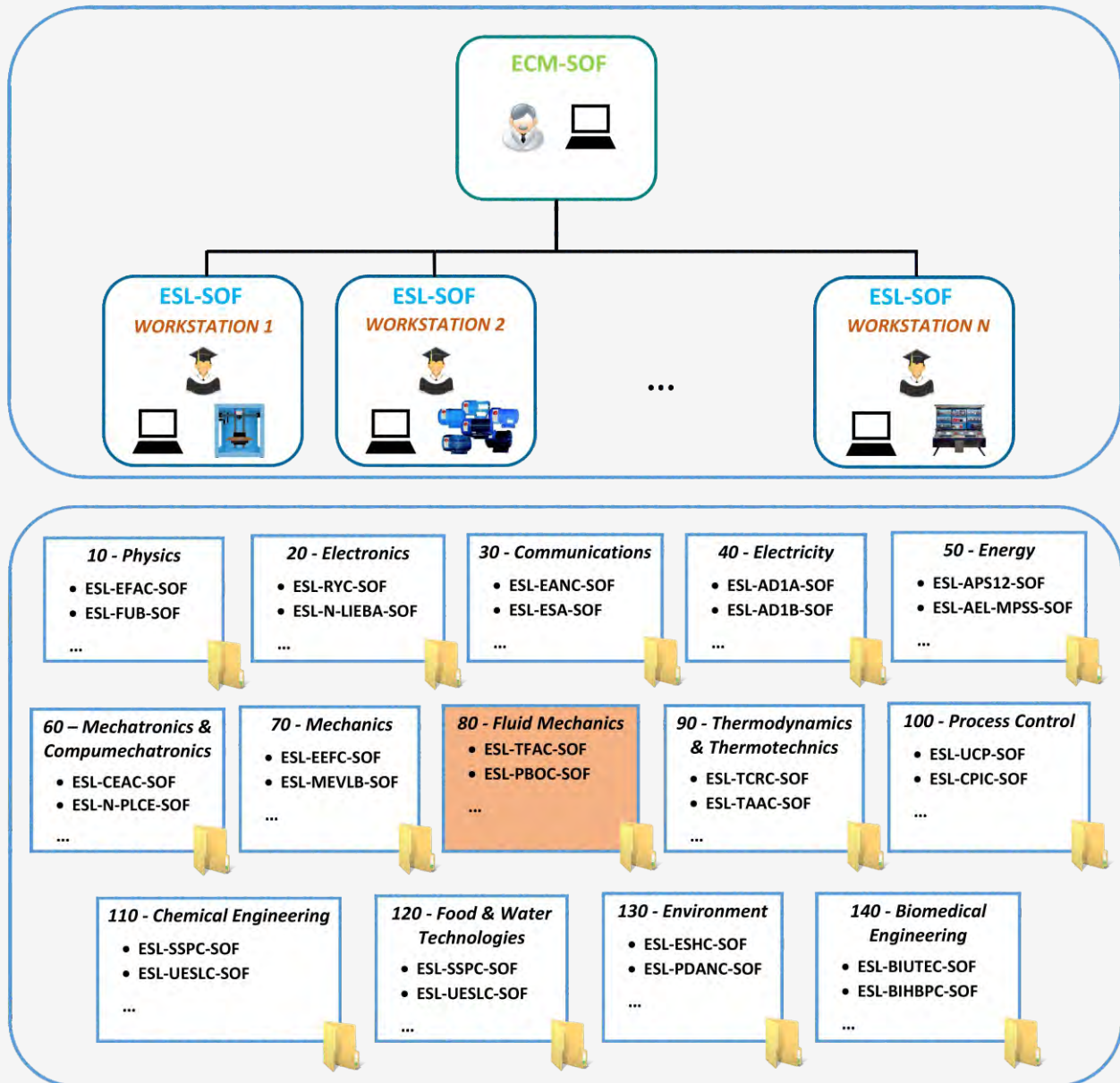Existing Tasks checking & monitoring.

2.3 EPE. EDIBON Practical Exercises Program Package.
Practical Exercises accomplishment by following the Manual provided by EDIBON.

2.4 ETTE. EDIBON Training Test & Exam Program Package.
Evaluation Methods to prove the student's knowledge and progression.

2.5 ECAL. EDIBON Calculations Program Package.
Calculations computing and plotting.

2.6 ERS. EDIBON Results & Statistics Program Package.
Student results monitoring.
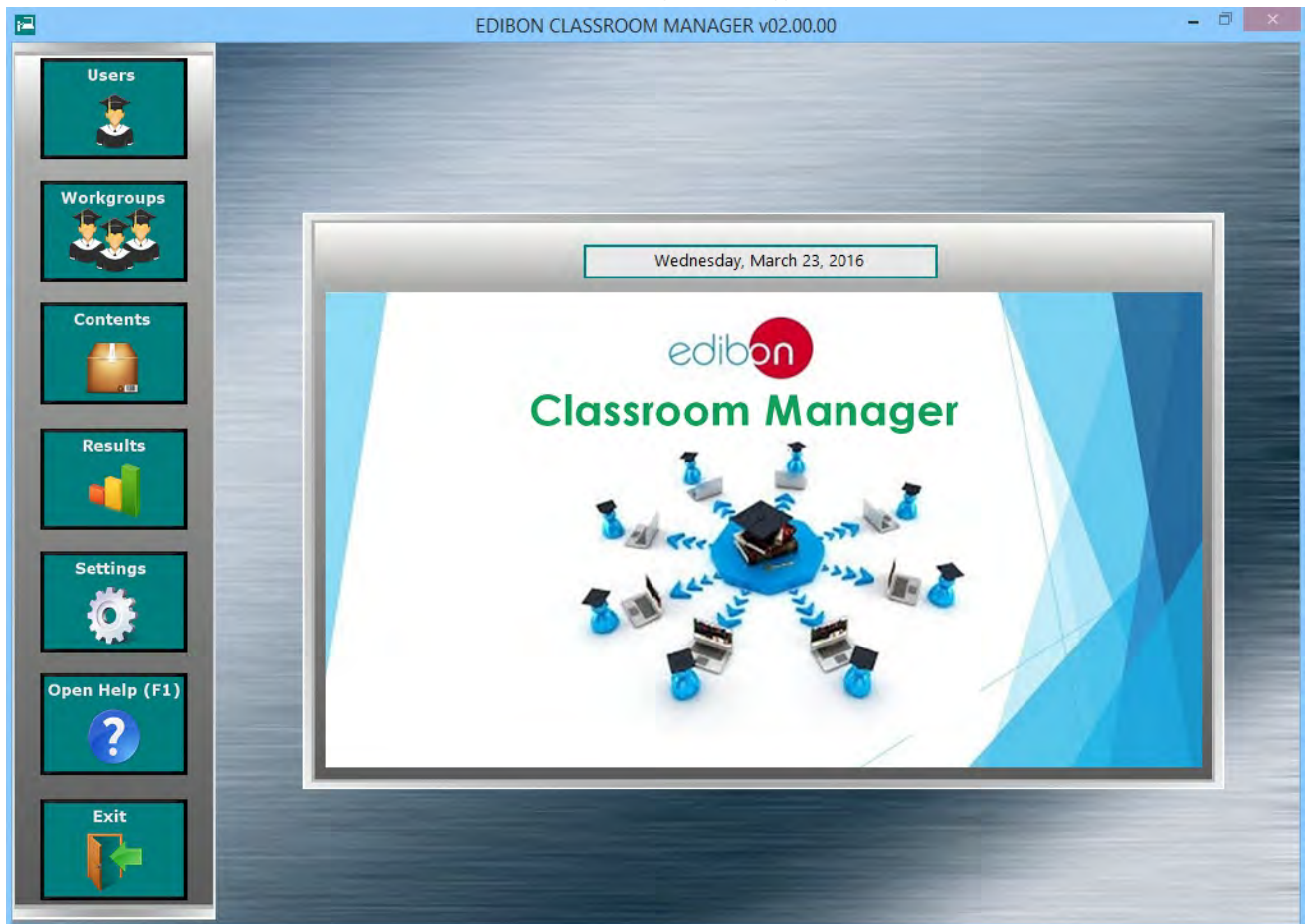
The following picture shows a Laboratory incorporating the ICAI Software System in several Workstations:

ECM-SOF

ESL-SOF
WORKSTATION 1

ESL-SOF
WORKSTATION 2

...

ESL-SOF
WORKSTATION N

10 - Physics
- **ESL-EFAC-SOF**
- **ESL-FUB-SOF**
...

20 - Electronics
- **ESL-RYC-SOF**
- **ESL-N-LIEBA-SOF**
...

30 - Communications
- **ESL-EANC-SOF**
- **ESL-ESA-SOF**
...

40 - Electricity
- **ESL-AD1A-SOF**
- **ESL-AD1B-SOF**
...

50 - Energy
- **ESL-APS12-SOF**
- **ESL-AEL-MPSS-SOF**
...

60 – Mechatronics & Compumechatronics
- **ESL-CEAC-SOF**
- **ESL-N-PLCE-SOF**
...

70 - Mechanics
- **ESL-EEFC-SOF**
- **ESL-MEVLB-SOF**
...

80 - Fluid Mechanics
- **ESL-TFAC-SOF**
- **ESL-PBOC-SOF**
...

90 - Thermodynamics & Thermotechnics
- **ESL-TCRC-SOF**
- **ESL-TAAC-SOF**
...

100 - Process Control
- **ESL-UCP-SOF**
- **ESL-CPIC-SOF**
...

110 - Chemical Engineering
- **ESL-SSPC-SOF**
- **ESL-UESLC-SOF**
...

120 - Food & Water Technologies
- **ESL-SSPC-SOF**
- **ESL-UESLC-SOF**
...

130 - Environment
- **ESL-ESHC-SOF**
- **ESL-PDANC-SOF**
...

140 - Biomedical Engineering
- **ESL-BIUTEC-SOF**
- **ESL-BIHBPC-SOF**
...

* Contents included for all ECM-SOF and ESL-SOF Workstations.

SOFTWARE MAIN SCREENS

ECM-SOF. EDIBON Classroom Manager Software Application main screen

EWT. EDIBON Workgroups & Tasks Program Package - Main Screen

SOFTWARE MAIN SCREENS

ECAL. EDIBON Calculations Program Package - Formula Editor Screen

ETTE. EDIBON Training Test & Exam Program Package – Main Screen with Numeric Result Question

SOFTWARE MAIN SCREENS

ERS.EDIBON Results & Statistics Program Package - Detailed Test

ERS.EDIBON Results & Statistics Program Package - Student Scores Histogram

www.edibon.com
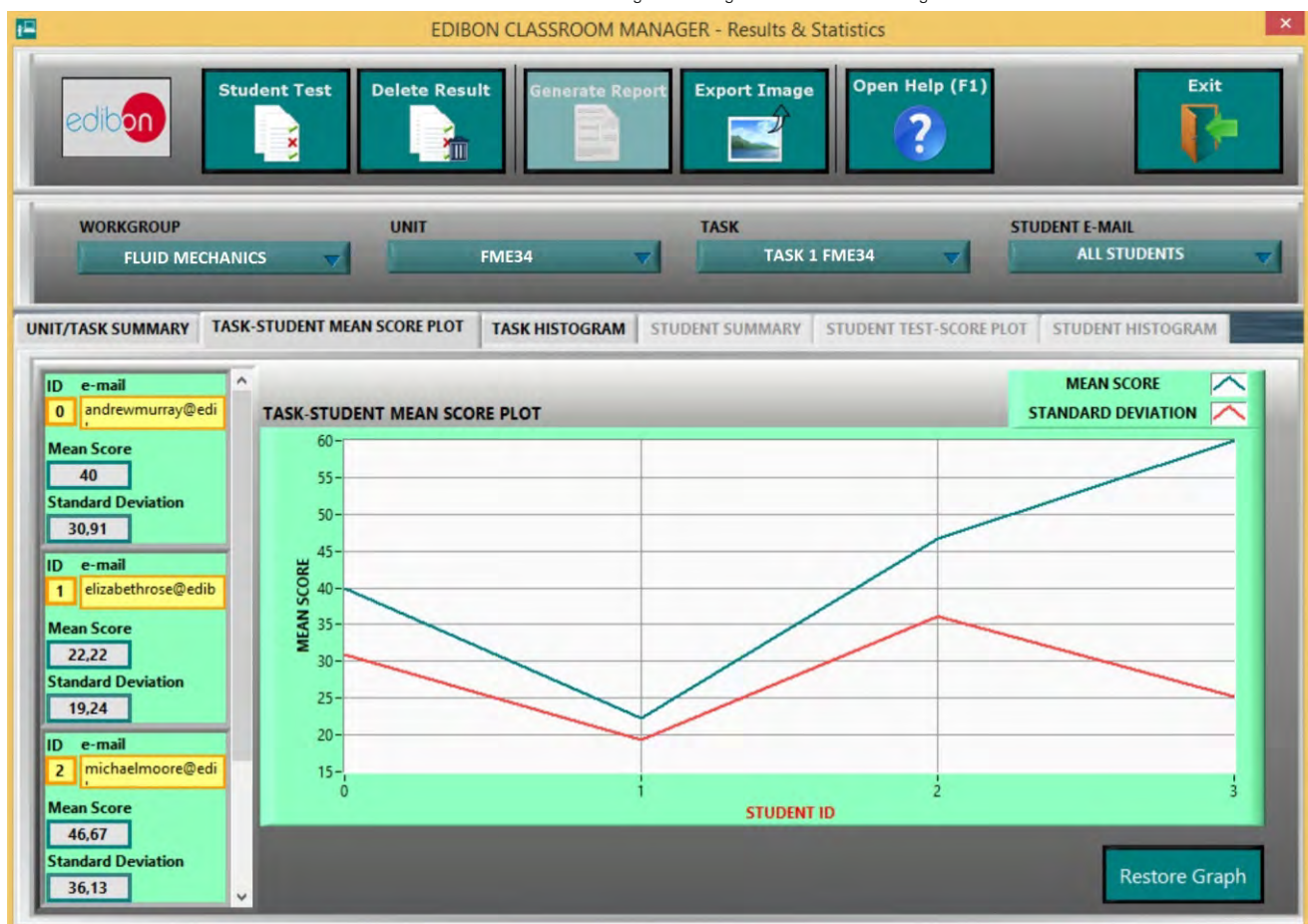
SOFTWARE MAIN SCREENS

ESL-SOF. EDIBON Student LabSoft Software Application main screen
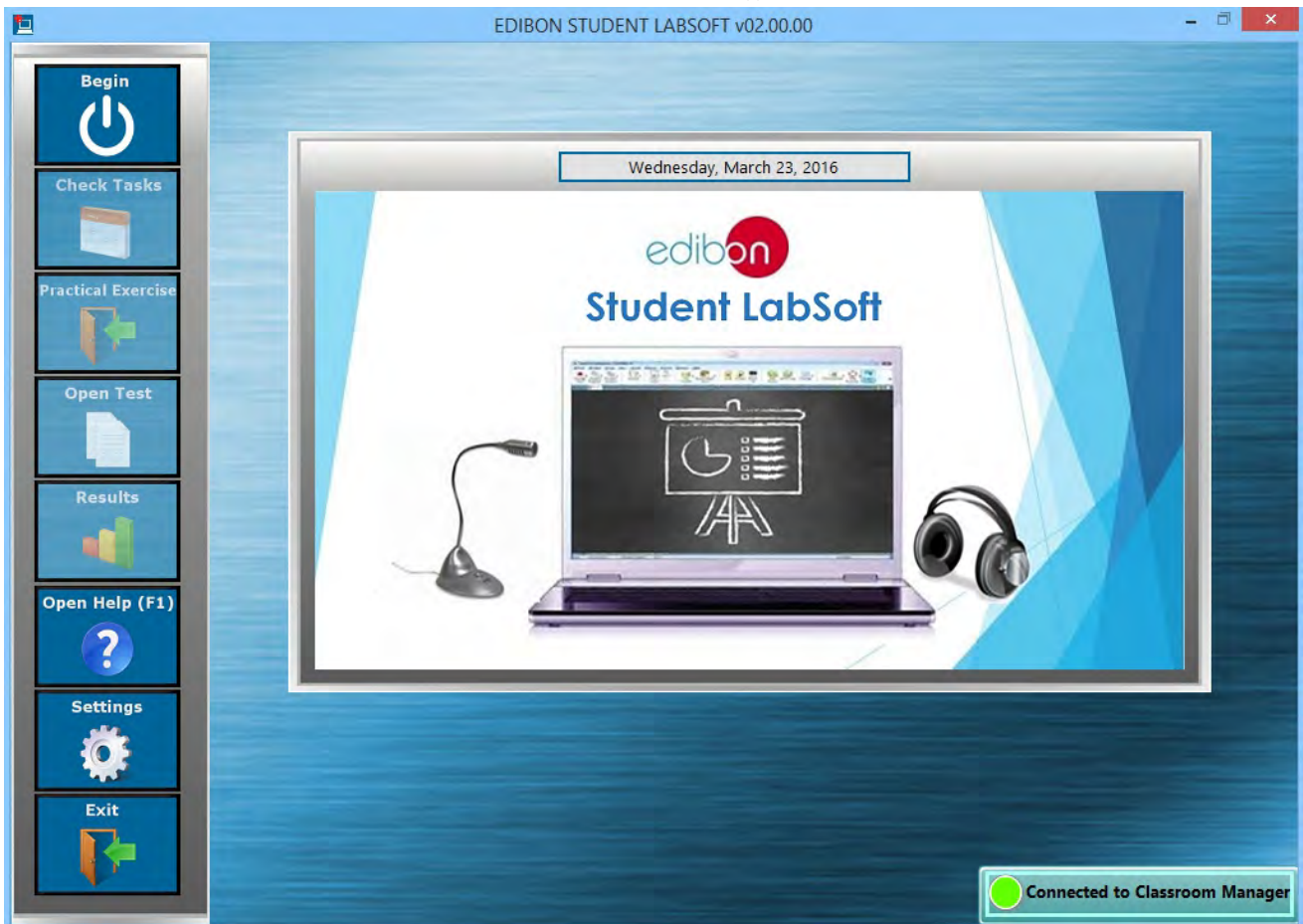
EPE. EDIBON Practical Exercise Program Package main screen

Continue...

SOFTWARE MAIN SCREENS

ECAL. EDIBON Calculations Program Package main screen

SPREADSHEET

Compute	Clear	Plot Table	Plot Function f(x)	Save Table	Load Table	Open Help (F1)	Exit

Hydrostatic Pressure

$$P = P_0 + \rho \cdot g \cdot h \begin{cases} P: \text{pressure at h depth/presión a profundidad h} \\ P_0(P0): \text{reference pressure/presión de referencia} \\ \rho(d): \text{density/densidad} \\ h: \text{depth/profundidad} \\ g: \text{gravity/gravedad} \end{cases}$$

Enlarge Picture

Constant Name	Value
g (m/s^2)	9,8

density (Kg/m^3)	P0 (Pa)	h (m)	P (Pa)
1000	1E+5	10	1,98E+5
1200	3,5E+5	1	3,6176E+5
987	5,16E+5	3	5,4502E+5

ETTE. EDIBON Training Test & Exam Program Package – Multi-Choice Question for a Training Test.

EDIBON STUDENT LABSOFT - Test

edibon | Prev Question | Next Question | Start Test | Finish Test | Open Help (F1) | Exit

Workgroup	Unit	Exercise
FLUID MECHANICS	FME28	TEST_n2_PE_n3-4_FME28

TRAINING TEST

Teacher Name		Student e-mails	# of Questions	Test Time	Left Time
EDIBON INSTRUCTOR	0	andrewmurray@edibon.com	5	01:00:00	00:59:51

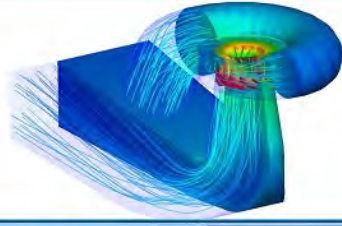**Enlarge Picture**

edibon question

Question 4

Question Score **20**

Which of these phenomena affect on an important way to the Francis turbine working?

Question Video Name
NO VIDEO

Question Video

a	High outlet pressure
b	Cavitation
c	Low outlet pressure
d	High runner's speed.

SOFTWARE MAIN SCREENS
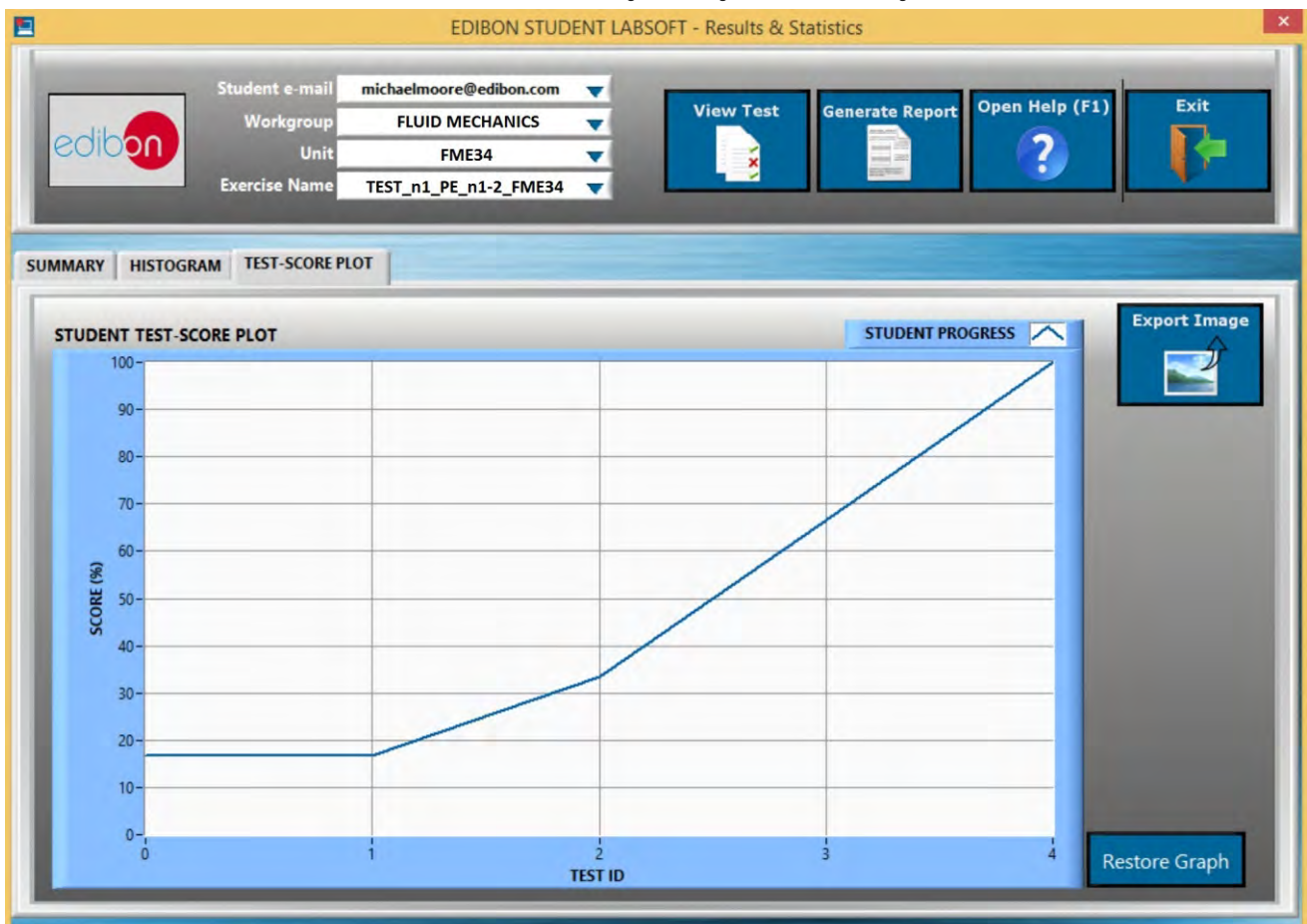
ERS.EDIBON Results & Statistics Program Package – Question Explanation

EDIBON STUDENT LABSOFT - Results Viewer

Open Help (F1)

Exit

Workgroup	Unit	Exercise
FLUID MECHANICS	FME28	TEST_n2_PE_n3-4_FME28(1)

Teacher Name	Student Name	# of Questions	Right Questions	Score(%)	Test Hour & Date
EDIBON INSTRUCTOR	andrewmurray@edibon.com	5	1	20	11:49:16 22/11/2016

TRAINING TEST

Enlarge Picture

Question 1
Question 2
Question 3
Question 4
Question 5

Current Question | **Question Explanation**

EXPLANATION: The cavitation must be controlled in the Francis turbine because it usually appears, reducing the efficiency of the turbine.

Explanation Video Name
NO VIDEO

Explanation Video

Explanation Video Description
NO DESCRIPTION FOR THIS VIDEO

ERS.EDIBON Results & Statistics Program Package - Student Scores Progression

EDIBON STUDENT LABSOFT - Results & Statistics

Student e-mail	michaelmoore@edibon.com
Workgroup	FLUID MECHANICS
Unit	FME34
Exercise Name	TEST_n1_PE_n1-2_FME34

View Test | Generate Report | Open Help (F1) | Exit

SUMMARY | HISTOGRAM | TEST-SCORE PLOT

STUDENT TEST-SCORE PLOT

STUDENT PROGRESS

Export Image

Y-axis: SCORE (%) — 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100
X-axis: TEST ID — 0, 1, 2, 3, 4

Restore Graph

EDIBON-NET allows unlimited students to connect and take advantage of ICAI software in a wide variety of areas, in any classroom by offering additional network hardware:

- ✓ Gigabit Ethernet Switch.
- ✓ Gigabit Ethernet Wire.
- ✓ Network Card.

* For more details, please contact us.

REQUIREMENTS

1. **Operating System:**

   Windows 7 32 bits or later.

2. **PC Hard drive free space:**

   Between 1GB and 10GB depending on the units purchased.

3. **RAM:**

   2GB.

4. **Processor:**

   Intel Core i5.

5. **Screen resolution:**

   1024 x 768 or higher.

6. **Windows complements:**

   .NET Framework 4.5 or later must be activated (this complement can be installed with the CD provided by EDIBON).

7. **Windows media player 12:**

   Included in Windows Vista, 7, 8 and 8.1 by default.

8. **PDF reader:**

   Adobe Reader X or later (this software can be installed with the CD provided by EDIBON).

9. **Web browser:**

   Internet Explorer, Mozilla Firefox or Google Chrome.

10. **A CD/DVD drive:**

    A free USB port to plug the HASP USB Key (this key is provided by EDIBON).

11. **A Network Interface Card.***

12. **A Network Cable** must be plugged to the computer to work in LAN MODE.*****

* Requirements 11 and 12 are necessary to set a connection between EDIBON Classroom Manager and EDIBON Student LabSoft, otherwise EDIBON Student LabSoft will work just in LOCAL MODE.

More details:
www.edibon.com/products/catalogues/en/ICAI.pdf

✱ Specifications subject to change without previous notice, due to the convenience of improvements of the product.

REPRESENTATIVE:

edibon
INTERNATIONAL

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Issue: ED01/17
Date: January/2017