



## **Innovative features:** ICAI = ECM-SOF + ESL-SOF

## 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.



ISO 9000: Quality Management (for Design, Manufacturing, Commercialization and After-sales service)







Page 1

## INTRODUCTION

## 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. Practical Exercises: Practical Exercises Manual & Multimedia Resources.
- b. Tests: 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. Graphical Results: 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.

## **GENERAL DESCRIPTION**

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:



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



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



1.2 EWT. EDIBON Workgroups & Tasks Program Package.

Administration and assignment of Workgroups, Tasks and Training sessions.



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

& Equations.



1.3 EPE. EDIBON Practical Exercises Program Package.

Creation and Integration of Practical Exercises and Multimedia Resources.



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.



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



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



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



2.3 EPE. EDIBON Practical Exercises Program Package.

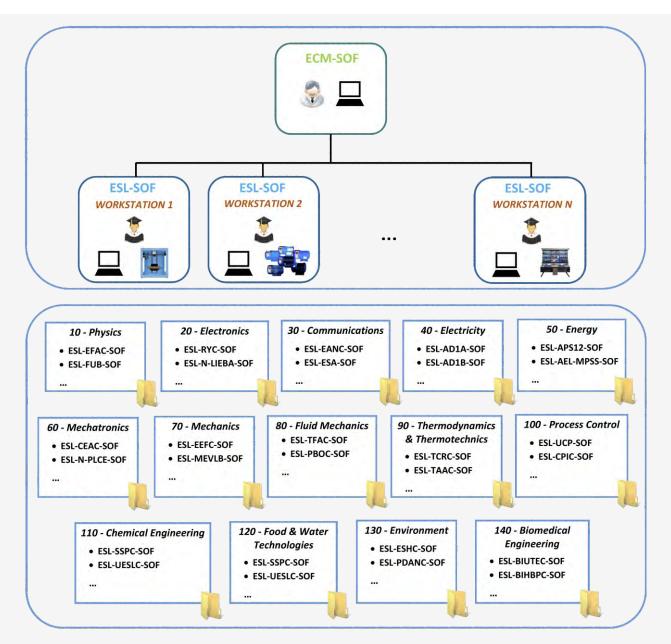
Practical Exercises accomplishment by following the Manual provided by EDIBON.



2.6 ERS. EDIBON Results & Statistics Program Package. Student results monitoring.

#### GENERAL DESCRIPTION

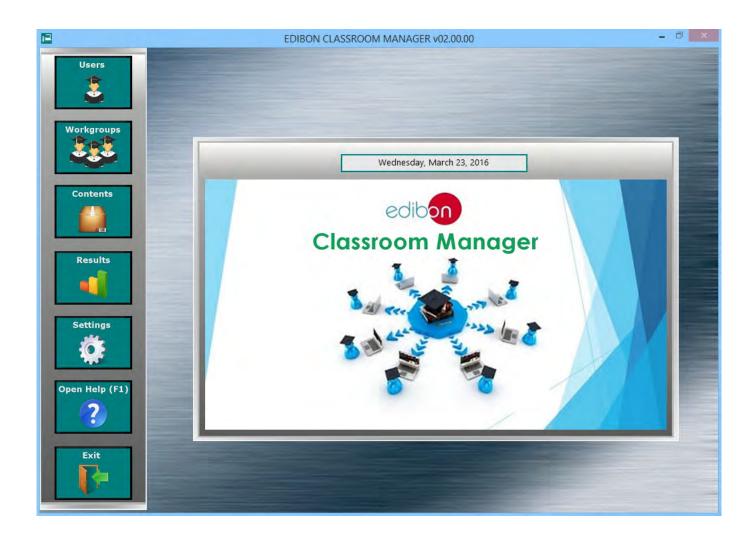
The following picture shows a Laboratory incorporating the ICAI Software System in several Workstations:



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

## Instructor Software

## 1. ECM-SOF. EDIBON CLASSROOM MANAGER SOFTWARE APPLICATION



ECM-SOF. EDIBON Classroom Manager Software Application includes the following Software Packages:

- 1.1. Users Program Package.
- 1.2. Workgroups & Tasks Pogram Package.
- 1.3. Practical Exercises Program Package.
- 1.4. Training Test & Exam Program Package.
- 1.5. Calculations Program Package.
- 1.6. Results & Statistics Program Package.
- 1.7. Options & Tools Program Package.
- 1.8. Context Help Program Package.

#### 1.1. Users Program Package

#### ECM-SOF. EDIBON Classroom Manager Software Application main screen

<b>2</b>	EDIBON CLASSROOM MANAGER v02.00.00
Users Workgroups	Wednesday, March 23, 2016
Contents	Classroom Manager

The Users Program Package includes the following modules:

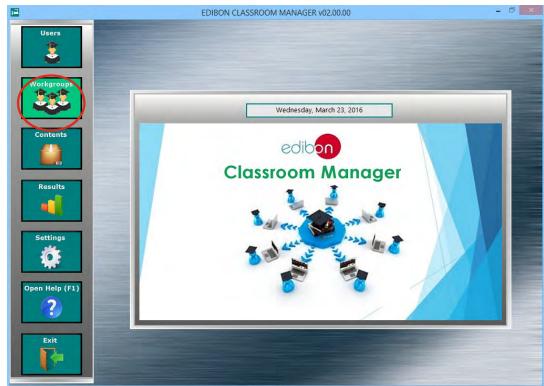
- 1.1.1. Independent User Data Base. All the information about the registered users is stored here. This Data Base is exclusively managed by the Instructor.
- 1.1.2. Addition, deletion, viewing and editing of users. These features provide the Instructor total control over the User Data Base.
- 1.1.3. **User Search Engine**, allowing to find a specific student.
- 1.1.4. **User Sort Tool**, allowing to organize the students list.
- 1.1.5. **User-Friendly** management interface.

#### USERS Program Package screen

2	EDIBON CLASSROOM MANAGER - Users
Search Bar	New User     Edit User     Delete User     Open Help (F1)       13     13     13
Registered Users List	
dicaprio@edibon.com A newton@edibon.com einstein@edibon.com andrew@edibon.com	Registered User Datasheet
	First Name Surnames Birth Date
	Andrew Murray DD/MM/YYYY
	Address City State Zip Code Phone Email andrew@edibon.com Created by TECNICO3 Viernes, 4 de marco de 2016, 13:41:06
v Sort Users	

#### 1.2. Workgroups & Tasks Program Package

ECM-SOF. EDIBON Classroom Manager Software Application main screen



The Workgroups & Tasks Program Package includes the following modules:

- 1.2.1. Addition, deletion, viewing and editing of user Workgroups. These features provide the Instructor total control over any existing Workgroup.
- 1.2.2. **Default Workgroup with Default planned Tasks** to start working from the first day. and pre-configured by EDIBON for each one of your EDIBON Teaching Units.
- 1.2.3. Task Progression and Status control, presenting the current status of the planned jobs for each individual task in a summary table format.
- 1.2.4. Printable Report for Workgroups in a summary table format to export the information presented in this software to a pretty similar format.
- 1.2.5. Workgroups Status Monitoring. As Instructor, you will be up to date about the status of the scheduled jobs for any Workgroup and any of its members.
- 1.2.6. Restore Default settings without needing to the reinstall the software again.

WORKGROUPS & TASKS Program Package - Main Screen

edibon	-				Exit
Add Workgroup	Edit Workgroup	Delete Workgroup	rate Report	Sort b	y
DEFAULT WORKGRO	UP 🚽 AEL-A	D15A 🥣 ALL TASKS	ALL STUDENTS		TASKS 🔫
STUDENT E-MAIL	TASK NAME	TASK STATUS	PRACTICAL EXERCISE	TRAINING TEST	EXAM 🔨
dicaprio@edibon.coi	TASK 1 AEL-AD15A	Planned Start: 00:00:00 29/02/2010 Not started Planned End: 00:00:00 30/12/2099 Not ended	Dedicated 00:00:00 of 01:00:00	-	
einstein@edibon.cor	TASK 1 AEL-AD15A	Planned Start: 00:00:00 29/02/2014 Not started Planned End: 00:00:00 30/12/2099 Not ended	Dedicated 00:00:00 of 01:00:00	-	
newton@edibon.cor	TASK 1 AEL-AD15A	Planned Start: 00:00:00 29/02/2010 Not started Planned End: 00:00:00 30/12/2099 Not ended	6 Checking the N-ALI02 power supply Dedicated 00:00:00 of 01:00:00		
andrew@edibon.con	TASK 1 AEL-AD15A	Planned Start: 00:00:00 29/02/2010 Not started Planned End: 00:00:00 30/12/2099 Not ended	Dedicated 00:00:00 of 01:00:00		
dicaprio@edibon.coi	TASK 2 AEL-AD15A	Planned Start: 00:00:00 29/02/2010 Not started Planned End: 00:00:00 30/12/2099 Not ended	Dedicated 00:00:00 of 01:00:00	TEST_n1_PE_n1-2_ 0 attempts of 5	
einstein@edibon.cor	TASK 2 AEL-AD15A	Planned Start: 00:00:00 29/02/2018 Not started Planned End: 00:00:00 30/12/2099	Dedicated 00:00:00 of 01:00:00	TEST_n1_PE_n1-2_ 0 attempts of 5	-

#### 1.2. Workgroups & Tasks Program Package (continuation)

#### 1.2.7. Two kind of Access to a Workgroup:

- a) Limited: Only the Instructor determines which users can access.
- b) <u>Open</u>: Every registered user will be able to access.
- 1.2.8. Assignment of Units and users to each Workgroup allowing to work with one or more specific Units.
- 1.2.9. Multi-User for each Unit and Multi-Unit for each user. Consequently, several users can work with a specific Unit as well as any user can work with several Units.

#### WORKGROUPS & TASKS Program Package – Users & Units Assignment Screen

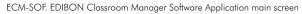
ULT WORKGROUP	Add Task Edit Task Remove Task Open Help (F1)
udents Tasks Information	
Step 1. Add Units to this Workgroup	
Available Units	Units in this Workgroup*
AEL-AD15A         A           AEL-AD22         A           AEL-AD23         A           AEL-AD24         A           AEL-AD23         A           AEL-AD24         A           AEL-AD23         A           AEL-AD24         A           AEL-AD30         A           AEL-AD3A         A           AEL-AD3A         A           AEL-AD3A         A           Step 2, Add Students to this Workgroup	Add Unit Add Unit AEL-ADISA AEL-CMISA AE
Registered Students	Students in this Workgroup
andrew@edibon.com dicaprio@edibon.com einstein@edibon.com newton@edibon.com	Add Student andrew@edibon.com com einstein@edibon.com newton@edibon.com
~	

- 1.2.10. Assignment of an unlimited number of Tasks to work with each one of the Units assigned to any Workgroup.
- 1.2.11. Multi-Contents for each Task to understand the main concepts inherent to each Unit.
- 1.2.12. Time Control and maximum number of attempts for each job scheduled for each task.

WORKGROUPS & TASKS Program Package – Tasks Assignment Screen

1	EDIBON CLASSROOM MANA	GER - Edit Workgroups	
A <b>Task must include at least one content</b> a Practical Exercise, a Training Test or an Exam). sks Creator			telp (F1)
Available Tests and Practical Exercises		Task Datasheet	
B AREA 04 - ELECTRICITY	^	Task Name	
AEL-IMSU     PRACTICAL EXERCISES		TASK 1 AEL-AD	15A
CHECKING THE N-ALI01 INDUSTRIAL POL BASIC WIRING OF THE ADVANCED FREQU BASIC PROGRAMMING OF THE N-V/CA. BRAKING TEST WITH EDDY CURRENT BR ADVANCED PROGRAMMING OF THE FRE DIRECT START DIRECT START DIRECT START DIRECT START DIRECT START WITH A MANUAL CO TESTS TEST. N1_PE_N1-2_AEL-IMSU.TE TEST.N2_PE_N3-4_AEL-IMSU.TE	JENCY CO ADVENCE AKE AND F QUENCY ( Add Content	Task Start Date     Task End Date       00:00:00 29/02/2016     00:00:00 30/12/2099       Assigned Practical Exercise       Practical Exercise Name       Checking the N-ALI02 power supply	Practical Exercise Time
TEST_N3_PE_N5-6_AEL-IMSU.TE	Remove Content	Assigned Training Test	
TEST_N4_PE_N7-8_AEL-IMSU.TE EXAMS	include a contraint	Iraining lest Name	Training Test Attempts
AEL-CM4		TEST_n1_PE_n1-2_AEL-IMSU.TE	÷ 5
	and the second sec	Assigned Exam	
AEL-AD6A     AEL-AD40			
AEL-AD3A		Exam Name	
AEL-AD30			
		Additional Information	
AEL-AD24     AEL-AD23		Auditional morniation	~
AEL-AD22			2

#### 1.3. Practical Exercises Program Package



	EDIBON CLASSROOM MANAGER v02.00.00 -	×
Users		AN NO
Workgroups	Wednesday, March 23, 2016	
Contents Tests	edibon Classroom Manager	
Results		
Settings	30000000	
Open Help (F1)		
Exit		

The Practical Exercises Program Package includes the following modules:

- 1.3.1. Addition, deletion, viewing and editing of Practical Exercises. These features provide the Instructor total control to configure any Practical Exercise.
- 1.3.2. **Practical Exercises Sections & Contents Index**, providing an overview of the number of Practical Exercises to perform with each Unit.
- 1.3.3. A complete set of Practical Exercises with default Multimedia Resources (Audios, Videos, Animations, Pictures...) are provided by EDIBON for each one of your Units.

#### PRACTICAL EXERCISES Program Package – Sections & Contents Index Screen

Area & Unit AREA 04 - ELECTRICI AD3A	open nessure	IAGER - Practical Exer	cise Editor	Open H	lelp (F1)	it 1
T PRACTICAL EXERCISES MANUAL INDEX	UNIT PRACTICAL EXERCISES MANUAL	1			-	
MANUAL SECTIONS FOR THIS UNIT						
SECTION NAME			INITIAL PAG	E LAST PA	GE # OF RESOURCE	S A
Practical Exercise 1 : checking the N-ALI02	main power supply		27	28	1	
Practical Exercise 2 : checking the N-ALIO2 Practical Exercise 2 : checking the N-ALIO3			29	30	1	
Practical Exercise 3 : Testing the fire station			31	32	1	
Practical Exercise 4 : Testing the fire detect			33	35	1	
Practical Exercise 5 : Real application throu	gh two security zones		36	38	1	
Appendix 1 : ANNEX			39	105	0	
Other sections of Manual			-	÷	0	
A CONTRACTOR OF						
						¥
~					Sort by	
SECTION RESOURCES					RESOURCE TYPE	_
PRACTICAL EXERCISE		RESOURCE TYPE	RESOURCE NAM	10	LINKED TO PAGE	
Practical Exercise 5 : Real application throu	ab two security zones	VIDEO	electrovalvula.m		36	<b>^</b>
Practical Exercise 5: Real application throu	gh two security zones	VIDEO	electrovalvula.m	p4	50	
						~
			_			
RESOURCE DESCRIPTION						
RESOURCE NAME: electrovalvula.mp4 (VID	EO)					^
RESOURCE DESCRIPTION: NO DESCRIPTION	N FOR THIS VIDEO					
						¥

#### 1.3. Practical Exercises Program Package (continuation)

- 1.3.4. PDF format for Practical Exercises Manual.
- 1.3.5. **Practical Exercises Manual Navigation Tools** allowing to move faster through the manual as well as to focus on some specific sections of it.

PRACTIC	CAL EXERCISES Program Package – PDF Manual Screen	
EDIE EDIE	BON CLASSROOM MANAGER - Practical Exercise Editor	×
Area & Unit AREA 04 - ELECTRICITY - AEL- IMSU	Open Resource Manager	Exit
Section	Other sections of Manual	Page 5
Previous Page	<image/> <image/> <text><text><text><section-header></section-header></text></text></text>	

1.3.6. **Practical Exercise Multimedia Resources Management** allowing managing your own Multimedia Resources, attached to the Practical Exercises Manual.

Video for this Page NO VIDEO FOR THIS PAGE Add/ Replace Video Construction Constru	ON FOR THIS VIDEO
Audio for this Page	
NO AUDIO FOR THIS PAGE     Organizar     Nueva carpeta       Animation for this Page     Image: Constraint of this Page     Image: Constraint of this Page       NO ANIMATION FOR THIS PAGE     Image: Constraint of this Page     Image: Constraint of this Page	buscar en HELP_VIDEUS
Animation for this Page NO ANIMATION FOR THIS PAGE	-
Picture for this Page     Picture for this Page     Picture for this Page     Imperiation of the page       NO PICTURE FOR THIS PAGE     Documentos       Imagenes       Música       Vídeos       SISTEMA (C:)	

PRACTICAL EXERCISES Program Package – Multimedia Resources Management Screen

#### 1.4. Training Test & Exam Program Package

1		EDIBON CLASSROOM MANAGER v02.00.00	- 0 ×
	Users Users Workgroups Contents Contents Contents Settings Settings Settings Copen Help (F1) ?	Practical Exercise         Tests         Calculations	
	Exit		

The Training Test & Exam Program Package includes the following modules:

- 1.4.1. Addition, Deletion, Viewing and Editing of Training Tests and Exams. These features provide the Instructor total control to configure any Training Test and Exam.
- 1.4.2. Test Errors & Warnings Checker, providing additional help and tips during the Test creation/edition process.
- 1.4.3. Multi-Choice and Numeric Result Questions, aided by Multimedia Resources to evaluate the knowledge acquired by the users in a more versatile way.

2	EDIBON CLASSROOM MANAGER - Test Creator
edibon	New Test Open Test Remove Test Save Test Open Help (F1)
Prev Question	Number of Questions     5       Current Question     Question Explanation       Question Type     MULTICHOICE BOOLEAN
Next Question	Question 4     Question Score       Question 4     10       Find the mistake.     10
Remove Question	Power Supply Question Video Name NO VIDEO Question Video
Add Img	a Grounds are not connected
	a     Grounds are not connected       b     Line is connected to neutral terminal.       c     We have suplified the DC circuit badly.
Remove Img	
	d Line and neutral are not at the same row

TRAINING TEST & EXAM Program Package - Main Screen with Multi-Choice Question

#### 1.4. Training Test & Exam Program Package (continuation)

#### TRAINING TEST & EXAM Program Package – Main Screen with Numeric Result Question

<b>E</b>	EDIBON CLASSROOM MANAGER - Test Creator
edibon	New Test Open Test Remove Test Open Help (F1)
Prev Question	Number of Questions     10       Current Question     Question Explanation       Ouestion Type     NUMERIC RESULT
Next Question	Question Type NUMERIC RESULT edibon Question Score Question 3 10 A three-pase induction motor with one pair of poles is supplied with 380V and 50Hz. Velocity of the rotor is measured: 2955 r.p.m.
<b>Remove Question</b>	Calculate the compensation factor (%).
2 Add Img	Teacher Result: 2 1.5 ERROR TOLERANCE (%) 2 0
Remove Img	

1.4.4. Question and Explanations, aided by Multimedia Resources allowing to explain the answers to the users.

#### TRAINING TEST & EXAM Program Package – Main Screen with Question Explanation

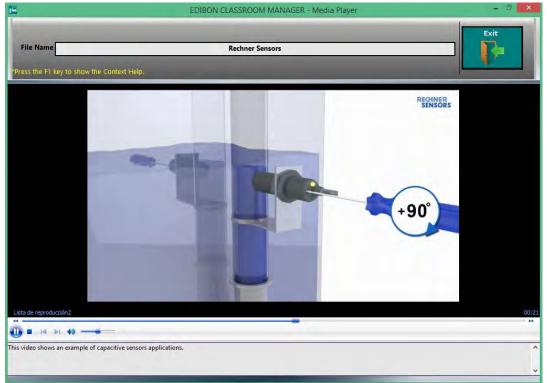
<b>1</b>	EDIBON C	CLASSROOM MANAGER - Test Creator	×
edibon	New Test Open Test Rem	sove Test	Open Help (F1)
Prev Question	Number of Questions 5 Current Question Question Explanation	Check Test Errors & Warnings	Enlarge Picture
Next Question	In the capacitive sensors, a small voltage is applied in the surface capacitance, resulting in an uniform electrostatic field	DRIVEN	
		Explanation Video Name Rechner Sensors.mp4	Explanation Video
		Explanation Video Description	Explanation video
Remove Img		This video shows an example of capacitive sensor application	<b>^</b>

## 1.4. Training Test & Exam Program Package (continuation)

- 1.4.5. Collection of Training Tests and Exams provided by EDIBON for each Unit to allowing to start working from the first day.
- 1.4.6. Multimedia Resources Management. Attach your own Pictures and Videos to each individual Question as well as to its explanation.

EDIBON CLASSROOM MANAGER - Test Creator
Image: Number of Questions     5       Current Question     Question       Current Question     Question       Current Question     Question
xt Duest 🖻 Test Creator - Video Settings 🗴
Explanation Video for the Question 5           Rechner Sensors.mp4
d Quest Add/Replace Video
Remove Video
Play Video
Add Ime
Press the F1 key to show the Context Help. n Video Description
amove Img

#### TRAINING TEST & EXAM Program Package – Question Explanation Video



#### 1.5. Calculations Program Package

#### ECM-SOF. EDIBON Classroom Manager Software Application main screen



The Calculations Program Package includes the following software package:

#### 1.5.1. Formula Creator Program Package.

The Formula Creator Program Package includes the following modules:

- 1.5.1.1. Formula Viewer. All formulas of all units can be displayed, edited, copied to another unit and removed.
- 1.5.1.2. Several expressions linked to the Practical Exercises of the different Units.

#### EDIBON CLASSROOM MANAGER - Calculations Editor Open Help Exit ? Units & Formulas AREA 01 - PHYSICS AREA 02 - ELECTRONICS AREA 03 - COMMUNICATIO AREA 04 - ELECTRICITY AEL-AD15A PRESSURE HARMONIC OSCILLAT DAMPED FUNCTION ACTIVE WER **Edit Formula** AEL-AD22 ELECTRIC POWER EXPONENTIAL FUNCT ∑(x+y\* $P = U_F \cdot I_F \cdot \cos\varphi$ SURFACE AEL-AD23 AEL-AD24 AEL-AD28A AEL-AD30 AEL-AD3A AEL-AD3A\_COPY AEL-AD40 AEL-AD6A uplicate Formu $\sum (x+y)^2$ AEL-AD0A AEL-AD9A AEL-CM4 AEL-IMSU Remove Formul AFL-IMSU COPY Σ(x+y) AREA 05 - ENERGY AREA 06 - MECHATRONICS

#### FORMULA CREATOR Program Package - Formula Viewer screen

## 1.5. Calculations Program Package (continuation)

- 1.5.1. Formula Creator Program Package (continuation)
  - 1.5.1.3. **Formula Editor** for Practical Exercise of the different Units. This feature allows to create new formulas and to edit the existing ones.
  - 1.5.1.4. Unit and Parameter Viewer to add/edit/remove all the parameters (variables & constants) of a formula.

		FORMULA C	CREATOR	Program Package - Formula Editor screer	n (I)	
		EDI	BON CLASS	ROOM MANAGER - Calculations Editor		
					Open Help	it }=
Name Units P W VF V	Value - -	Type  Variable Variable		nit Name Teacher KEL-AD15A formula	Formula Nam	
Edit	parameter	Variable Constant		P=VF*IF*cos(PHASE)		rt v

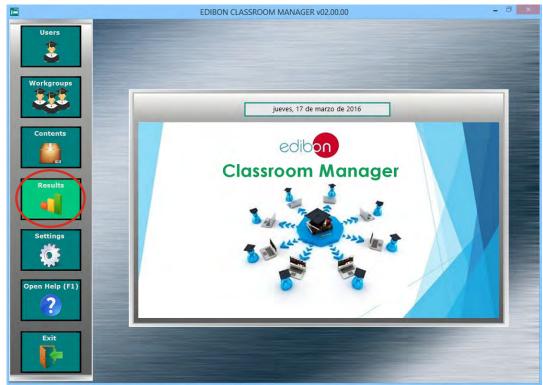
- 1.5.1.5. Formula Preview.
- 1.5.1.6. Formula Tester. Every Formula can be tested by using the Spreadsheet & Formulas Package.
- 1.5.1.7. Auxiliary Formula Picture automatically generated by the software or manually added by the Instructor.

FORMULA CREATOR Program Package- Formula Editor screen (II)

C	hoose or Enter Path of	File		×	ons Editor	×
🕞 🎯 – 🛧 🔳 Escritorio 🕨	v (	5 Buscar en Escrito	orio	P	Open Help	Exit
Organizar 👻 Nueva carpeta			9 · 🗇	0	?	
Favoritos	ADMINISTRATOR			^		
🖫 Sitios recientes 🛛 🚺	Este equipo				Teacher Fo	rmula Name
Este equipo	Bibliotecas				1	CTIVE POWER
Documentos	Red					Add Img
Vídeos	2013_OCTOBER_2ND			~		Remove Img
Nombre:		Custom Pattern     OK	(*.jpg) Cancel	→ ar	$I_F \cdot cos \varphi$	
Add paramete	er			ñ	$T_F \cos \psi$	
Edit paramete	er					
						Return
Remove parame	eter					

#### 1.6. Results & Statistics Program Package





The Results & Statistics Program Package includes the following software package:

#### 1.6.1. Reports & Results Management Program Package.

The Formula Creator Program Package includes the following modules:

- 1.6.1.1. Detailed Result sorted by Workgroups, by Work-Units, by Tasks and by Users. These results are presented in a summary table format.
- 1.6.1.2. Viewing and deletion of specific Results. The Instructor is able to open a specific result to view it into detail as well as to remove the ones he/she considers.

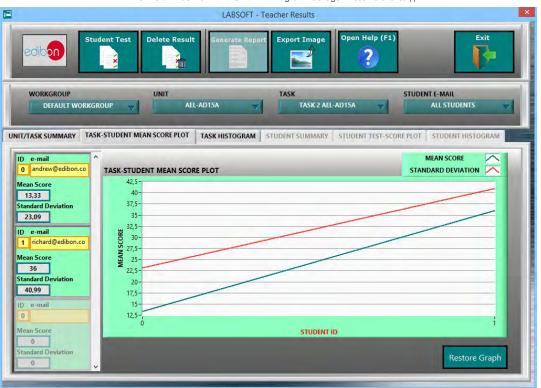
WORKG	ROUP FAULT WORKGROUP		AEL-AD15A	TASK	2 AEL-AD15A	STU	DENT E-MAIL ALL STUDEN	ITS -
TACKCU								
TASK SU	MMARY TASK-STUE	DENT MEAN SCORE PLO	TASK HISTOGRA	M STUDENT SUMA	ARY STUDENT	TEST-SCORE PLO	T STUDENT H	ISTOGRAM
ASK SUM		WORKGROUP	UNIT/TA SK	DATE & HOUR	RESULT NAME	RESULT TYPE R		SCORE (%)
0 0 1	andrew@edibon.com andrew@edibon.com andrew@edibon.com richard@edibon.com richard@edibon.com	DEFAULT WORKGROUF DEFAULT WORKGROUF DEFAULT WORKGROUF	-AD15A/TASK 2 AEL-AU -AD15A/TASK 2 AEL-AU -AD15A/TASK 2 AEL-AU	0 10:58:35 08/03/2015 0 10:58:56 08/03/2015 0 17:40:08 04/03/2015	1_PE_n1-2_AEL-AD 1_PE_n1-2_AEL-AD 1_PE_n1-2_AEL-AD	Training Test Training Test Training Test	0 of 5 0 of 5 2 of 5 0 of 5 2 of 5	0,00 0,00 40,00 0,00 40,00
1 1 1	richard@edibon.com richard@edibon.com richard@edibon.com richard@edibon.com	DEFAULT WORKGROUF DEFAULT WORKGROUF	-AD15A/TASK 2 AEL-AL -AD15A/TASK 2 AEL-AL	0 11:11:35 08/03/2015 0 11:15:57 08/03/2015	1_PE_n1-2_AEL-AD 1_PE_n1-2_AEL-AD	Training Test Training Test	2 of 5 2 of 5 0 of 5 5 of 5	40,00 40,00 0,00 100,00

REPORTS & RESULTS MANAGEMENT Program Package - Main Screen

#### 1.6. Results & Statistics Program Package (continuation)

#### 1.6.1. Reports & Results Management Program Package (continuation)

1.6.1.3. **Result Statistics:** Some statistics such as **Mean Scores** and **Standard Deviations** as well as representations such as **Histograms** are shown.



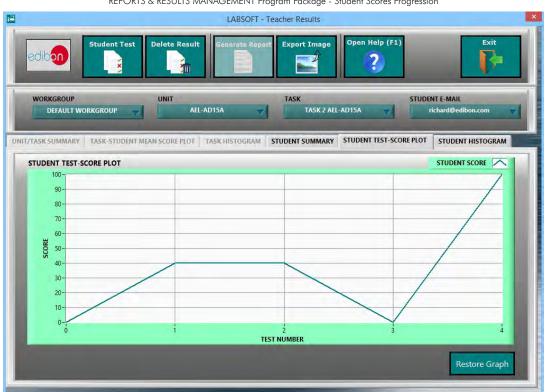
#### REPORTS & RESULTS MANAGEMENT Program Package - Result Statistics (I)

#### REPORTS & RESULTS MANAGEMENT Program Package - Result Statistics (II)



## 1.6. Results & Statistics Program Package (continuation)

- 1.6.1. Reports & Results Management Program Package (continuation)
  - 1.6.1.4. Detailed User Progression: Spreadsheet, Graphics & Text.



## REPORTS & RESULTS MANAGEMENT Program Package - Student Scores Progression





#### 1.6. Results & Statistics Program Package (continuation)

#### 1.6.1. Reports & Results Management Program Package (continuation)

1.6.1.5. Detailed Test Results: Specific results can be opened to generate a detailed view of the Questions with the chosen answers in contrast with the correct answers, the obtained marks and Explanations for each individual question.

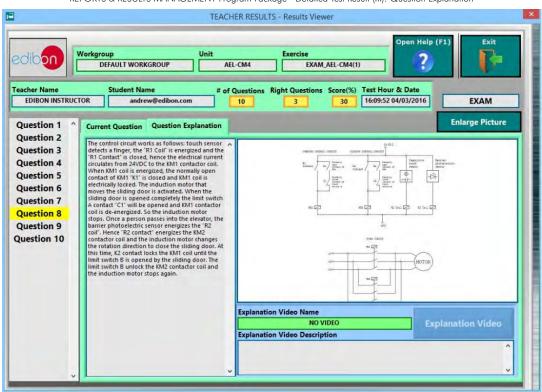
dibon	TEACHER RESULTS - Results Viewer       Open Help (F1)     Exit       DEFAULT WORKGROUP     AEL-CM4     EXAM_AEL-CM4(1)
eacher Name EDIBON INSTRUC	Student Name         # of Questions         Right Questions         Score(%)         Test Hour & Date           TOR         andrew@edibon.com         10         3         30         16:09:52 04/03/2016         EXAM
Question 1 ^ Question 2 Question 3 Question 4 Question 5 Question 7 Question 7 Question 8 Question 9 Question 10	Current Question       Question Explanation       Enlarge Picture         Colored       Question Score       Question Score       Image Picture         Question       Question Score       10         In this exercise the student must design a control circuit with a capacitive touch push-button and a barrier photoelectric sensor.       10         The capacitive touch push-button will open the sliding door of an elevator and the barrier photoelectric sensor detects a person passes into the elevator. When the barrier photoelectric sensor detects a person passes to ato the sliding door rhas the olimit switches, one of them is used to stop the sliding door has two limit switches, one of them is used to stop the sliding door when it is opened (Switch A) and the other one is used to stop the sliding door when it is opened (Switch A) and the other one is used to stop the sliding door when it is opened (Switch A) and the other one is used to stop the sliding door when it is opened (Switch A) and the other one is used to stop the sliding door when it is opened (Switch B).       Question Video Name       Question Video
	a CIRCUIT A b CIRCUIT B crincuit B

#### REPORTS & RESULTS MANAGEMENT Program Package - Detailed Test Result (II): Answers & Marks

nedibon	Workgroup Unit Exercise Open Help ( DEFAULT WORKGROUP AEL-CM4 EXAM_AEL-CM4(1)	(F1) Exit
eacher Name EDIBON INSTRUC	Student Name         # of Questions         Right Questions         Score(%)         Test Hour & Date           TOR         andrew@edibon.com         10         3         30         16:09:52 04/03/2016	EXAM
Question 1 ^ Question 2 Question 3 Question 4 Question 5 Question 6 Question 7 Question 8 Question 9 Question 10	Question Score question Question 6 (Wrong)	Question Video
	a CIRCUIT A	ssen Answer(s)

#### 1.6. Results & Statistics Program Package (continuation)

#### 1.6.1. Reports & Results Management Program Package (continuation)



REPORTS & RESULTS MANAGEMENT Program Package - Detailed Test Result (III): Question Explanation

#### 1.6. Results & Statistics Program Package (continuation)

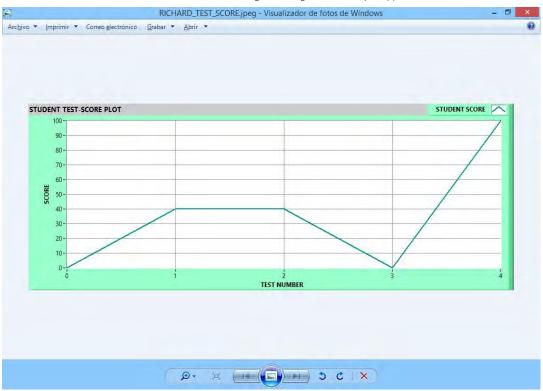
#### 1.6.1. Reports & Results Management Program Package (continuation)

1.6.1.6. **Printable Reports** allowing to display summary tables graphs and that can be exported to HTML formatted tables and JPEG Images.

REPORTS & RESULTS MANAGEMENT Program Package - Printable Reports (I): HTML

								លំដ
di	han							
UDE	ENT RESUL	TS REPOR	Т					
1	DATE	WORKGROUP	UNIT	TASK	STUDENT/S			
tes, 8 de n	narzo de 2016 - 11:24	DEFAULT WORKGROU	P AEL-AD15A	TASK 2 AEL-AD15A	richard@edibon.com			
SULT ID	E-MAIL	WORKGROUP	UNIT/TA	SK DATE & HOUR	RESULT NAME	RESULT TYPE	RIGHT QUESTIONS	SCORE (%)
0	richard@edibon.com	DEFAULT WORKGROUP	AEL-AD15A/T AEL-AD15		TEST_n1_PE_n1-2_AEL- AD15A(1)	Training Test	0 of 5	0,00
1	richard@edibon.com	DEFAULT WORKGROUP	AEL-AD15A/T AEL-AD15		TEST_n1_PE_n1-2_AEL- AD15A(2)	Training Test	2 of 5	40,00
2	richard@edibon.com	DEFAULT WORKGROUP	AEL-AD15A/T AEL-AD15		TEST_n1_PE_n1-2_AEL- AD15A(3)	Training Test	2 of 5	40,00
3	richard@edibon.com	DEFAULT WORKGROUP	AEL-AD15A/T AEL-AD15		TEST_n1_PE_n1-2_AEL- AD15A(4)	Training Test	0 of 5	0,00
4	richard@edibon.com	DEFAULT WORKGROUP	AEL-AD15A/T AEL-AD15		TEST_n1_PE_n1-2_AEL- AD15A(5)	Training Test	5 of 5	100,00

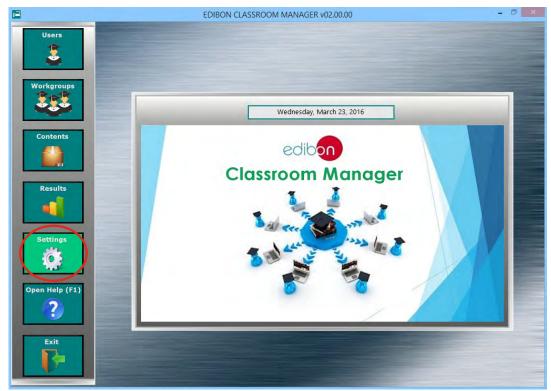
#### REPORTS & RESULTS MANAGEMENT Program Package - Printable Reports (II): JPEG Picture



v

#### 1.7. Options & Tools Program Package

	ECM-SOF. EDIBON	Classroom	Manager	Software	Application	main	screer
--	-----------------	-----------	---------	----------	-------------	------	--------



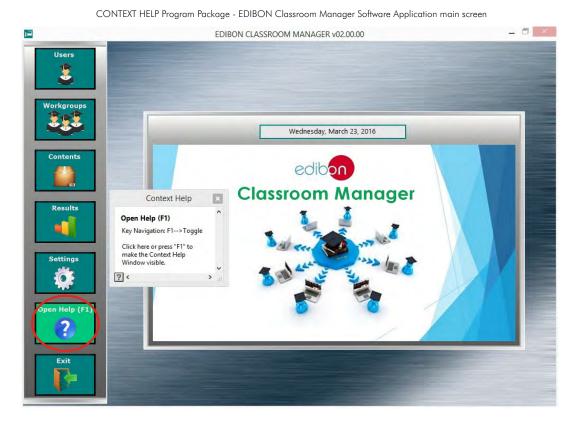
The Options & Tools Program Package includes the following modules:

- 1.7.1. Easy and Secure Connection between Manager and Users in a quick, easy and reliable way.
- 1.7.2. Self-Registration for users. The instructor can enable/disable this feature, which allows the students to register by themselves in the User Data Base.
- 1.7.3. Data Base Backups, to keep a copy of the Workgroups Data Base factory and last session status.
- 1.7.4. Restore Default Settings, to reset the Workgroups Data Base to its factory status without needing to reinstall the software again.

12	EDIBON CLASSROOM MANAGER v02.00.00	- 🗇 🗙
Users S Workgroups S Contents	EDIBON CLASSROOM MANAGER - Settings	
Results a Settings a b c c c c c c c c c c c c c	Recover Last Session Workgroups File Recover Factory Workgroups File	
Open Help (F1)	Restore Default Settings	

**OPTIONS & TOOLS Program Package screen** 

## 1.8. Context Help Program Package



The Context Help Program Package includes the following modules:

- 1.8.1. Floating Window for the Context Help. This window displays short explanations of the functionalities that any control or indicator can perform.
- 1.8.2. Enable and Disable Help. You can activate/deactivate the Context Help window at any moment.
- 1.8.3. Available anytime and anywhere.

#### CONTEXT HELP Program Package screen

3	EDIBON CLASSROOM MANAGER - Practical Exercise Editor		
Area & Unit AREA 04 - ELECTRIC ADISA	ITY - AEL-	Open Help (F	1) Exit
UNIT PRACTICAL EXERCISES MANUAL INDEX	Context Help		
Section	Page Resources Manager ADD/REPLACE/REMOVE RESOURCES to the page currently displayed.* *Resources that can be linked to a page: VIDEOS, AUDIOS, ANIMATIONS, PICTURES. No more than one resource of each type by page.	/83	Page 1
Vext Page Zoom In	7.1		
Zoom Out	7.1.1         Introduction           7.1.2         Some practical secretices possibilities           7.2         DESCRIPTION OF THE MODULES           7.2.1         N-ALIO2: DOMESTIC MAIN FOWER SUPPLY           7.2.2         N-ALIO2: DOMESTIC MAIN FOWER SUPPLY           7.2.1         N-ALIO2: DOMESTIC MAIN FOWER SUPPLY           7.2.2         N-ALIO2: DOMESTIC MAIN FOWER SUPPLY           7.2.3         N-LAM16: HALOGEN LANP           7.2.4         NSEL03: THREP FLOT LIGHTS MODULE           7.2.5         NSENN4: DDUCTIVE SENSOR TYPE PAP.           7.2.6         NSENN4: DDUCTIVE PROXIMITY SENSOR           7.2.7         NSENN9: DDUCTIVE PROVIMITY SENSOR           7.2.8         NSENN6: RADUCTIVE PROVIMITY SENSOR	3 4 4 9 10 11 11 13 15	
Appendix	7.3         THEORY.           73.1         Sensors           7.4         LABORATORY PRACTICAL EXERCISES           7.4.1         Previous considerations and precautions           7.4.2         Practical esserties 1: Checking the N-ALI02 power supply           7.4.3         Practical esserties 1: Checking the N-ALI02 power supply           7.4.4         Practical esserties 1: Checking the N-SEN04 PNP Type Cylindrical Inductive           7.4.5         Practical esserties 1: Checking the N-SEN04 PNP Type Cylindrical Inductive           7.4.6         Practical esserties 1: Checking the N-SEN04 PNP Type Cylindrical Inductive Program           7.4.6         Practical esserties 1: Checking the N-SEN04 PNP Type Cylindrical Inductive Program           7.4.6         Practical esserties 1: Checking the N-SEN04 PNP Type Cylindrical Inductive Program           7.4.6         Practical esserties 1: Checking the N-SEN04 PNP Type Cylindrical Inductive Program           7.4.7         Practical esserties 1: Checking the N-SEN04 PNP Type Cylindrical Inductive Program           7.4.7         Practical esserties 5: Checking the N-SEN04 PNP Type Expension PMP Type Cylindrical Inductive Program	20 65 66 68 Proximity Sensor 70 mity Sensor 73 70 mity Sensor 73	

## Student Software

## 2. ESL-SOF. EDIBON STUDENT LABSOFT SOFTWARE APPLICATION



ESL-SOF. EDIBON Student LabSoft Software Application includes the following Software Package:

- 2.1. Users Program Package.
- 2.2. Workgroups & Tasks Program Package.
- 2.3. Practical Exercises Program Package.
- 2.4. Training Test & Exam Program Package.
- 2.5. Calculations Program Package.
- 2.6. Results & Statistics Program Package.
- 2.7. Options & Tools Program Package.
- 2.8. Context Help Program Package.
- 2.9. Operating Modes: LOCAL and LAN Program Package.

#### 2.1. Users Program Package

#### ESL-SOF. EDIBON Student LabSoft Software Application main screen



The Users Program Package includes the following modules:

2.1.1. User Self Logging for Multiple Users. One or more users can log themselves at the same time and in the same computer, allowing them to work individually or in groups.



## 2.1. Users Program Package (continuation)

2.1.2. User Self Register. One or more users can register their own user in the same computer.

		EDIBON STUDENT LABSO	DFT v02.00.00		- 🗆 🗙
Begin U Check Tasks	New User Datasheet	EDIBON STUDENT LABSOFT	- User Registry Birth Da	ate	
Practical Exercise Open Test Den Test Copen Help (F1) Settings Exit	First Name * richard Address 1425 W 12 AVE State FLORIDA Email * richard@edibon.com Password * *****	Adams Zip Code 33135 Confirm Passv *****	City Miami Phone		
				<u> </u>	Connected to Classroom Manager

USERS Program Package – User Registry screen

#### 2.2. Workgroups & Tasks Program Package

#### ESL-SOF. EDIBON Student LabSoft Software Application main screen



The Workgroups & Tasks Program Package includes the following modules:

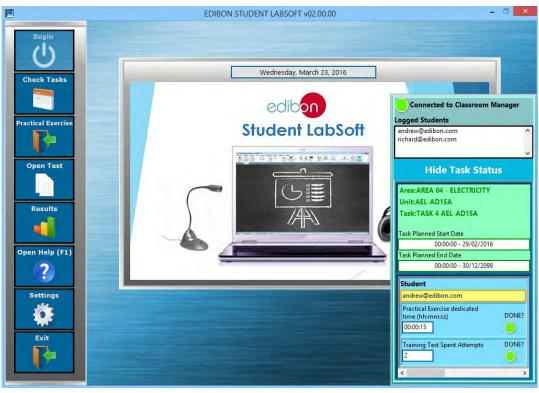
- 2.2.1. Scheduled Tasks Selection, with specific information about the contents of each individual task, for each Workgroup and Unit, in a summary table format.
- 2.2.2. Multi-User Scheduled Task Progression Status, in a summary table format. This second table allowing to gather the state of realization of the jobs assigned to a specific task for each logged user.

DEFAULT WOF		UNIT AEL-AD15A	•			edibor
TASK NAME	START DATE	END DATE	PRACTICAL EXERC	ISE	TRAINING TEST	EXAM
TASK 1 AEL-AD15A	00:00:00 - 29/02/2016	00:00:00 - 30/12/2099	Checking the N-ALI02 por Estimated Time: 01:1		-	
TASK 2 AEL-AD15A	- AD15A 00:00:00 - 29/02/2016 00:00:00 - 30/12/2099		Checking the N-ALI03 AC auxilia Estimated Time: 01:1		TEST_n1_PE_n1-2_AEL-A Test Time: 00:00:0 Attempts: 5	
TASK 3 AEL-AD15A	00:00:00 - 29/02/2016	00:00:00 - 30/12/2099	Checking the N-SEN04 Cylindrical Inductive Proximity Estimated Time: 01:00:00			1
TASK 4 AEL-AD15A	00:00:00 - 29/02/2016	00:00:00 - 30/12/2099	Checking the N-SEN14 AC Cylindrical Capacitive Pros Estimated Time: 01:00:00		TEST_n2_PE_n3-4_AEL-A Test Time: 00:00:0 Attempts: 5	
		k not done for all logged students.	Some logged students Task Done f have done this Task. logged st			elected Task.
		33	have done this rask.	logged sti		_
SELECTED TASK TASK 1 AEL E-MAIL richard@edibon andrew@edibon	.com E	CTICAL EXERCISE STA dedicated Time: 00:0000 tedicated Time: 00:0000	NTUS TRAINING	TEST STATUS		XAM STATUS

#### WORKGROUPS & TASKS Program Package – Scheduled Tasks screen

#### 2.2. Workgroups & Tasks Program Package (continuation)

2.2.3. User Current Task Status Indicator allows to displays the state of realization of the selected task for each logged user and is available during the whole session.



## 2.2. Workgroups & Tasks Program Package (continuation)

Example of applications for:

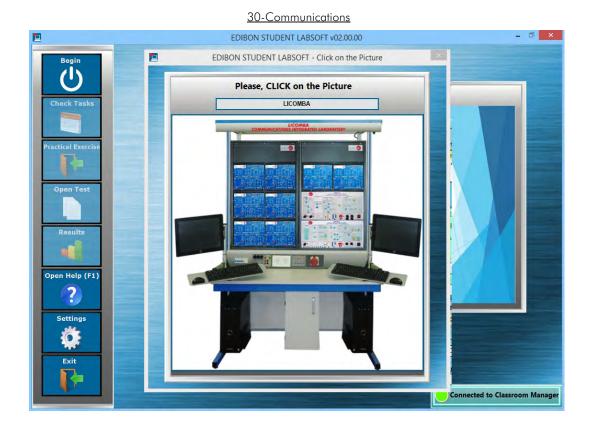


#### 20-Electronics



#### 2.2. Workgroups & Tasks Program Package (continuation)

Example of applications for: (continuation)



#### 40-Electricity



#### 2.2. Workgroups & Tasks Program Package (continuation)

Example of applications for: (continuation)



#### 60-Mechatronics



# <u>50-Energy</u>

#### 2.2. Workgroups & Tasks Program Package (continuation)

Example of applications for: (continuation)



### 80-Fluid Mechanics



#### 2.2. Workgroups & Tasks Program Package (continuation)

Example of applications for: (continuation)

# EDIBON STUDENT LABSOFT v02.00.00 - 🗇 🗙 EDIBON STUDENT LABSOFT - Click on the Picture () Please, CLICK on the Picture eck Tasks TAAC actical Exerci Results Open Help (F1) ? Settings 0 Exit Connected to Classroom Manager

## 90-Thermodynamics & Thermotechnics

#### 100-Process Control



#### 2.2. Workgroups & Tasks Program Package (continuation)

Example of applications for: (continuation)



#### 120-Food & Water Technologies



## 110-Chemical Engineering

#### 2.2. Workgroups & Tasks Program Package (continuation)

Example of applications for: (continuation)



### 140-Biomedical Engineering



#### 2.3. Practical Exercises Program Package

ESL-SOF	<b>FDIBON</b>	Student	LabSoft	Software	Application	main	screen
LOL 001.	LDIDOIN	010000111	Laboon	Soundie	, application	mann	3010011



The Practical Exercises Program Package includes the following modules:

- 2.3.1. Practical Exercises Manual in PDF Format.
- 2.3.2. Practical Exercises Manual Navigation Tools to move faster through the manual as well as to focus on some specific sections of it.
- 2.3.3. Windows basic tools shortcuts are included in this software interface: Notepad, Calculator and Web Browser.

		EDIBO	N STUDENT LAB	SOFI - Practi	cal Exercise		
LABORATORY PRACTIC	AL EXERCISES MANUA	a.		TOOLS			
Spreadsheet	Animation	Play Video	Play Audio	Picture	Multimedia Index	Open Help (F1)	Exit
1	Workgroup	1	Unit P	ractical Exerci	se		Page
Previous Page	DEFAULT W	VORKGROUP	AEL-AD15A		Checking the N-ALI03 AC auxil	liary power supply	68
Next Page Zoom In Toom Out Current Task		7.4.3.1 Obje Tł N-ALI03 mo be measured	ective ne objective of this	EL-AD15A hecking the N s practical exer f the voltage a er. ver supply (N-,		g mode of the	
		7.4.3.3 Proc	cedure				

#### PRACTICAL EXERCISES Program Package main screen

#### 2.3. Practical Exercises Program Package (continuation)

- 2.3.4. Updatable Multimedia Resources. Every resource added/replaced/removed by the Instructor using EDIBON Classroom Manager will be downloaded once the connection is set.
- 2.3.5. **Multimedia Resources Index:** This section presents a compilation of all the Multimedia Resources (Audio, Videos, Animations and Pictures) which are available for each one of the sections of the Practical Exercises Manual.

### PRACTICAL EXERCISES Program Package – Multimedia Resources Index

		EDIBON STUDENT LABSOFT - Multimedia Index	×
Animation	Play Video.	Play Audio Picture	en Help (F1) <b>Exit</b>
ediboo	Manual Section	All Sections	-
Muttimedia Indee RESOURCE TYPE PICTURE PICTURE PICTURE PICTURE PICTURE PICTURE	RESOURCE NAME AEL-AD15A, P1.jpg AEL-AD15A, P2.jpg AEL-AD15A, P3.jpg AEL-AD15A, P5.jpg AEL-AD15A, P5.jpg AEL-AD15A, P7.jpg AEL-AD15A, P7.jpg	MANUAL SECTION NAME Practical Exercise 1 : Checking the N-ALI02 power supply Practical Exercise 2 : Checking the N-SAU3 AC auxiliary power supply tical Exercise 3 : Checking the N-SEN14 AC cylindrical Conductive Proximity Sensor ical Exercise 5 : Checking the N-SEN29 AC cylindrical Conductive Proximity Sensor Module Practical Exercise 5 : Checking the N-SEN29 AC cylindrical Movement Sensor Module Practical Exercise 5 : Checking the N-SEN29 AC cylindrical modern and the Sensor Module Practical Exercise 5 : Real application of a detection system	PAGE 66 68 70 73 73 78 81 NIMATION 9 81 PICTURE SELECTED RESOURCE

#### PRACTICAL EXERCISES Program Package – Picture Viewer

<b>E</b>	EDIBON STUDENT LABSOFT - Picture Viewer	×
File Name	AEL-AD15A_P3	
Zoom In Ecom Out Coom Out Press the F1 key to show the Context Help.		
NC	D DESCRIPTION FOR THIS PICTURE	Ŷ

### 2.4. Training Test & Exam Program Package

ESL-SOF	<b>FDIBON</b>	Student	LabSoft	Software	Application	main	screen
LOL 001.	LDIDOIN	010000111	Laboon	Soundie	, application	mann	3010011



The Training Test & Exam Program Package includes the following modules:

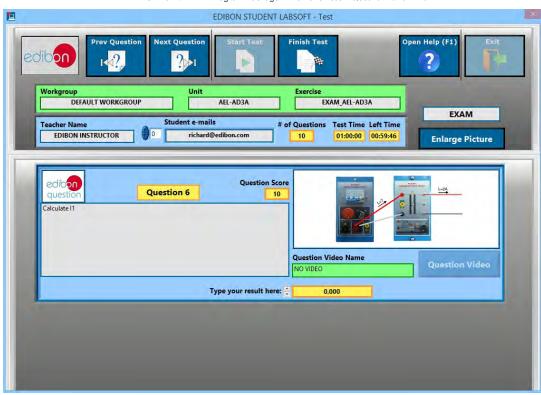
### 2.4.1. Two different Evaluation Methods: Training Test & Exam:

- a) <u>Training test</u>: can be performed several times. They are intended to revise the main concepts shown in the Practical Exercises.
   b) <u>Exam</u>: can be done just once.
- 2.4.2. Multi-Choice and Numeric Result Questions, aided by Multimedia Resources to evaluate the knowledge acquired by the users in a more versatile way.
- 2.4.3. Updatable Contents. Every content added/replaced/removed by the Instructor using EDIBON Classroom Manager will be downloaded once the connection is set.

EDIBON STUDENT LA	BSOFT - Test					
Prev Question         Next Question           Image: Comparison of the second	Finish Test Oper	Help (F1)				
kgroup Unit DEFAULT WORKGROUP AEL-CM4 her Name Student e-mails # of EDIBON INSTRUCTOR 0 richard@edibon.com	Exercise           TEST_n1_PE_n1-2_AEL-CM4           f Questions         Test Time           5         00:30:00         00:29:55	TRAINING TEST				
Cuestion Question 1 20 Pesidual current circuit breaker (RCCB) of the N-AU01 module is an electrical wiring te which disconnects a circuit whenever						
It detects that a overcurrent appears in a conductor	NO VIDEO	Question Video				
b       It detects that the electric current is not balanced between the energized conductor (line) and the return conductor (neutral)         c       It detects that the electric current is balanced between the energized conductor (line) and the return conductor (neutral)						
	Prev Question       Next Question         Image: Constraint of the second se	Image: Constraint of the N-ALIOT module is an electrical wiring exhibit disconnects a circuit whenever       Image: Constraint of the N-ALIOT module is an electrical wiring exhibit disconnects a circuit whenever				

TRAINING TEST & EXAM Program Package – Multi-Choice Question for a Training Test

#### 2.4. Training Test & Exam Program Package (continuation)



# TRAINING TEST & EXAM Program Package – Numeric Result Question for an Exam



#### TRAINING TEST & EXAM Program Package – Picture Viewer: Enlarged Question Picture

## 2.5. Calculations Program Package

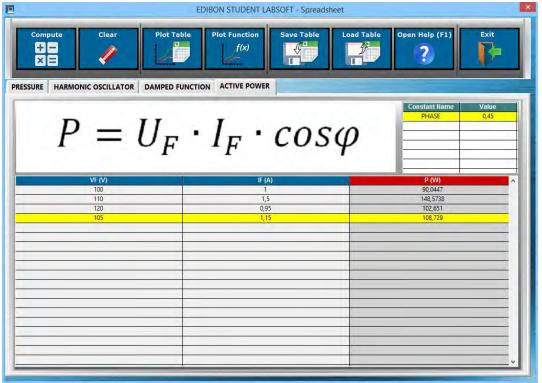
The Calculations Program Package includes the following software package:

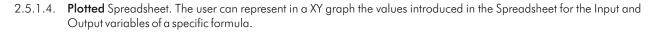
## 2.5.1. Spreadsheet & Formulas Program Package.

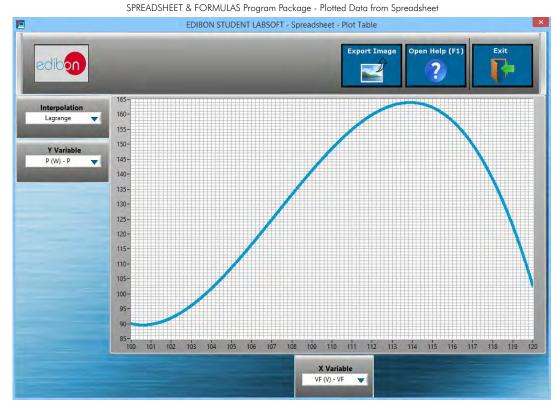
The Spreadsheet & Formulas Program Package includes the following modules:

- 2.5.1.1. Formula Viewer. All the formulas of a specific unit are displayed and calculations can be done by users.
- 2.5.1.2. **Spreadsheet** for **Input and Output variables** taken from the Expressions and Formulas. Output variables values will be generated each time all the input variables values be introduced.
- 2.5.1.3. **Calculation Records** for further evaluations. The user can keep the introduced values even after exiting this program package, avoiding losing them.





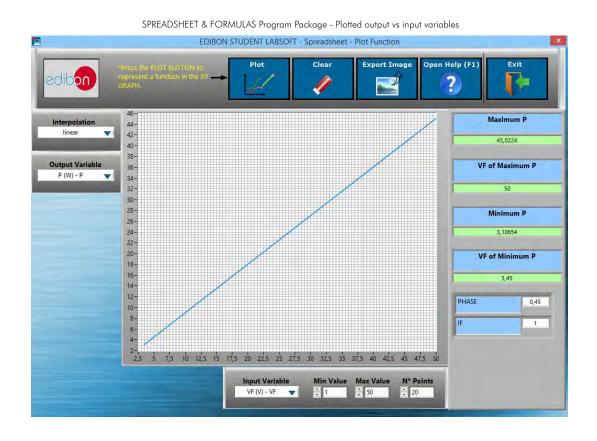




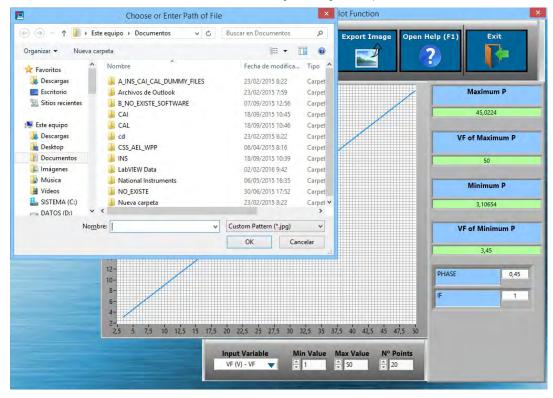
#### 2.5. Calculations Program Package (continuation)

#### 2.5.1. Spreadsheet & Formulas Program Package (continuation)

2.5.1.5. Variety of Interpolation Algorithms representing a finite number of values in a XY graph, several interpolation methods (linear interpolation, cubic Hermite, splines, Lagrange...) are available to get the best approach in each case:
 Linear. - Spline. - Cubic. - Hermite. - Lagrange.

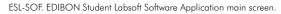


2.5.1.6. Exportable Data. All the graphs generated as well as the values introduced in the Spreadsheet tables can be exported.



SPREADSHEET & FORMULAS Program Package - Plot Exportation

#### 2.6. Results & Statistics Program Package





The Results & Statistics Program Package includes the following software package:

# 2.6.1. User Result & Reports Program Package.

The User Result & Reports Program Package includes the following modules:

- 2.6.1.1. Progress Representation: Spreadsheet, Graphic and Text.
- 2.6.1.2. Individual User Results summary table. Compilation of all the results obtained by each particular user.

#### USER RESULT & REPORTS Program Package - Main Screen

edib Mary	Exercise	kgroup Unit	DEFAULT AE ALL	@edibon.com WORKGROUP L-AD15A EXERCISES	*	View Te	est Generate	Report	n Help (F1)	Exit
TUDENT TEST ID 0 1 2 3 4 5	SUMMARY E-MAIL richard@edibon.com richard@edibon.com richard@edibon.com richard@edibon.com richard@edibon.com	DEFAULT W DEFAULT W DEFAULT W DEFAULT W DEFAULT W	ORKGROUF	AD15A/TASK 2 A AD15A/TASK 2 A AD15A/TASK 2 A AD15A/TASK 2 A	AEL-AD AEL-AD AEL-AD AEL-AD AEL-AD	11:10:17 08/03/2016 11:11:35 08/03/2016 11:15:57 08/03/2016 11:17:51 08/03/2016	RESULT NAME n1_PE_n1-2_AEL-AD n1_PE_n1-2_AEL-AD n1_PE_n1-2_AEL-AD n1_PE_n1-2_AEL-AD n2_PE_n3-4_AEL-AD	RESULT TYPE Training Test Training Test Training Test Training Test Training Test Training Test	RGHT QUESTIONS           0 of 5           2 of 5           2 of 5           0 of 5           5 of 5           0 of 5           0 of 5           0 of 5	0,00 40,00 40,00 0,00 0,00 100,00 0,00
MEAN	STANDA	RD DEVIAT	ION							

#### 2.6. Results & Statistics Program Package (continuation)

- 2.6.1. User Result & Reports Program Package (continuation)
  - 2.6.1.3. User Progressions in a XY graph representation in which the user can evaluate the evolution of his/her results working with a particular Unit.



USER RESULT & REPORTS Program Package - Student Scores Progression

2.6.1.4. **Result Statistics:** Some statistics such as **Mean Scores** and **Standard Deviations** as well as representations such as **Histograms** are shown.



#### USER RESULT & REPORTS Program Package - Student Scores Histogram

### 2.6. Results & Statistics Program Package (continuation)

- 2.6.1. User Result & Reports Program Package (continuation)
  - 2.6.1.5. **Detailed Test Results:** Specific results can be opened to generate a detailed view of the Questions with the chosen answers in contrast with the correct answers.

	EDIBON STUDENT LABSOFT - Results Viewer Open Help (F1) Exit
edibon	Workgroup         Unit         Exercise         Open neip (r1)         Ext           DEFAULT WORKGROUP         AEL-AD15A         TEST_n1_PE_n1-2_AEL-AD15A(5)         ?         .         .
eacher Name EDIBON INSTRU	Student Name         # of Questions         Right Questions         Score(%)         Test Hour & Date           JCTOR         richard@edibon.com         5         5         100         11:17:51 08/03/2016         TRAINING TEST
Question 1 Question 2 Question 3 Question 4 Question 5	Current Question Question Explanation  Enlarge Picture  Question Score Question 1 (Right) Question Score Performance of the consists of an emergency stop push-button and a safety key. These elements allow the circuit breaker to be activated under normal conditions. Explain which is the correct diagram.  Question Video Name Question Video NO VIDEO  Question Video
	<pre>&gt; </pre>

# USER RESULT & REPORTS Program Package - Detailed Test Result (I): Answers & Marks

### USER RESULT & REPORTS Program Package - Detailed Test Result (II): Question Explanation

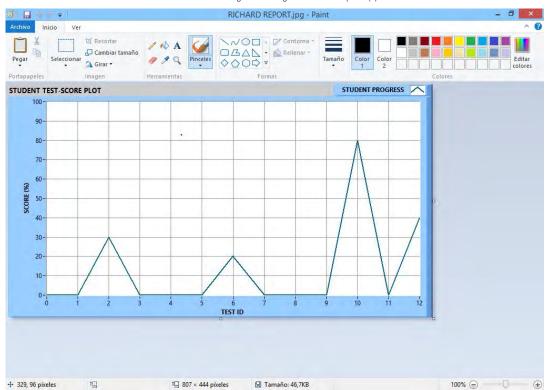
	P AULT WORKGROUP	Unit AEL-AD15A	Exercise TEST_n1_PE_n	1-2_AEL-AD15A(5)	Open Help (F1)	Exit
eacher Name S EDIBON INSTRUCTOR	itudent Name richard@edibon.com	# of Questions	Right Questions	Score(%) Test Hour 8		RAINING TEST
Question 2 Question 3 Question 4 Question 4	Question Question Expl g to the diagram, when the ele- working correctly the sum of th ra current leakage occurs, a thin tace by the ground unto the ne mer. This unbalance produces a n the toroid. Hence the circuit b	trical e  1 and  2 d current utral residual reaker is Explanatio	R A la DON VIdeo Name NO VI DON VIdeo Descript PTION FOR THIS VII	tion	Deperation Current Rowing throug $l_1 = l_1 + l_2 = 0$ Current Rowing throug torrold with earth fault $l_4 = l_1 + l_2 + l_3 = l_3$	n

#### 2.6. Results & Statistics Program Package (continuation)

### 2.6.1. User Result & Reports Program Package (continuation)

2.6.1.6. Printable Reports: allowing to display summary tables graphs and that can be exported to HTML formatted tables and JPEG Images.

	C:\Users\USUARI	O\Documents\STUDEN	T RESULTS REPORT, html	0-0 00	C:\Users\USUARIO\Docum ×			6
C		JLTS REPO	RT					
	DATE	WORKGROUP		ERCISE	TUDENT/S			
es, 11 d	de abril de 2016 - 17:04	DEFAULT WORKGRO	UP AEL-AD15A ALL E	XERCISES rich	ard@edibon.com			
	E-MAIL	WORKGROUP	UNIT/TASK	DATE &		RESULT	RIGHT	SCORE
est ID	E-MAIL	WORKGROUP	UNII/LASK	HOUR	RESULT NAME	TYPE	QUESTIONS	(%)
	richard@edibon.com	DEFAULT	AEL-AD15A/TASK 2 AEL-AD15A	HOUR 17:40:08 04/03/2016	TEST_nl_PE_nl-2_AEL- AD15Å(1)	TYPE Training Test		
0 0		DEFAULT	AEL-AD15A/TASK 2	17:40:08	TEST nl PE nl-2 AEL-		QUESTIONS	(%)
D 0 1	richard@edibon.com	DEFAULT WORKGROUP DEFAULT	AEL-AD15A/TASK 2 AEL-AD15A AEL-AD15A/TASK 2	17:40:08 04/03/2016 11:10:17	TEST_n1_PE_n1-2_AEL- AD15A(1) TEST_n1_PE_n1-2_AEL-	Training Test	QUESTIONS 0 of 5	(%) 0,00
D 0 1 2	richard@edibon.com richard@edibon.com	DEFAULT WORKGROUP DEFAULT WORKGROUP DEFAULT	AEL-ADI5A/TASK 2 AEL-ADI5A AEL-ADI5A/TASK 2 AEL-ADI5A/TASK 2 AEL-ADI5A/TASK 2	17:40:08 04/03/2016 11:10:17 08/03/2016 11:11:35	TEST_n1_PE_n1-2_AEL- AD15A(1) TEST_n1_PE_n1-2_AEL- AD15A(2) TEST_n1_PE_n1-2_AEL-	Training Test Training Test	QUESTIONS 0 of 5 2 of 5	(%) 0,00 40,00
D	richard@edibon.com richard@edibon.com richard@edibon.com	DEFAULT WORKGROUP DEFAULT WORKGROUP DEFAULT DEFAULT	AEL-ADI5A/TASK 2 AEL-ADI5A AEL-ADI5A/TASK 2 AEL-ADI5A/TASK 2 AEL-ADI5A/TASK 2 AEL-ADI5A/TASK 2 AEL-ADI5A/TASK 2	17:40:08 04/03/2016 11:10:17 08/03/2016 11:11:35 08/03/2016 11:15:57	TEST_ni_PE_nl-2_AEL- AD15A(1) TEST_ni_PE_nl-2_AEL- AD15A(2) TEST_ni_PE_nl-2_AEL- AD15A(3) TEST_ni_PE_nl-2_AEL-	Training Test Training Test Training Test	QUESTIONS 0 of 5 2 of 5 2 of 5	(%) 0,00 40,00 40,00



#### USER RESULT & REPORTS Program Package - Printable Reports (II): JPEG Picture

# 2.7. Options & Tools Program Package

#### ESL-SOF. EDIBON Student Labsoft Software Application main screen



The Options & Tools Program Package includes the following modules:

2.7.1. **Easy Setting** for a **LAN Connection** allowing to introduce the Instructor's IP-address and Port the connection with the EDIBON Classroom Manager computer will be set.

<b>E</b>		EDIBON STUDENT LABSOFT v02.00.00	- 🗗 🗙
Begin	<b>E</b>	EDIBON STUDENT LABSOFT - Settings	×
U U	Open Help (F1)	Save and Exit	Exit
Check Tasks	?		
	TCP-IP		
Practical Exercise		sroom Manager Adress	
		192.168.0.170	
Open Test	Class	6000 Honding Port	
Results			
Open Help (F1)			
		Restore Default Setting	
Settings		Restore Default Setting	
*		richard@edibon.com	^
Exit			U I
		Show Ta	ask Status

#### OPTIONS & TOOLS Program Package

# 2.8. Context Help Program Package

	CONTEXT HELP Program Package - EDIBON Student Labsoft Software Application main screen
<b>E</b>	EDIBON STUDENT LABSOFT v02.00.00 - 🗇 🗙
Begin U Check Tasks Check Tasks Practical Exercise Open Test Check Tasks Check	Wednesday, March 23, 2016         Image: Context Help         Image: Cont
	Connected to Classroom Manage

The Context Help Program Package includes the following modules:

- 2.8.1. Floating Window for the Context Help. This window displays short explanations of the functionalities that any control or indicator can perform.
- 2.8.2. Enable and Disable Help. You can activate/deactivate the Context Help window at any moment.
- 2.8.3. Available anytime and anywhere.

### CONTEXT HELP Program Package – Floating Window

	EDIBON STUDENT LABSOFT - Plot Resu	ilts 🔍
Student e-mail Workgroup	richard@edibon.com  ALL WORKGROUPS  View Test	Generate Report Open Help (F1) Exit
	Context Help	
SUMMARY HISTOGRAM TEST-SCORE PL	View Test OPEN the SELECTED RESULT to see it question by question in a detailed view." WARNING: Those students who open a Test to see its correct anwers will not be able to do this Test	
TESTID E-MAIL WOR	again (in CONNECTION MODE).	ILT NAME RESULT TYPE RIGHT QUESTIONS SCORE(%) A
0 irichard@edibon.com DEFAULT 1 richard@edibon.com DEFAULT 2 irichard@edibon.com DEFAULT	*The test to open is the one you have selected PE_r	1-2_AEL-AD Training Test 0 of 5 0,00 n1-2_AEL-Ch Training Test 4 of 5 80,00 ELL-AD3A(1) Exam 3 of 10 30,00
MEAN STANDARD DEVIATI 36.67 40.41	ON	

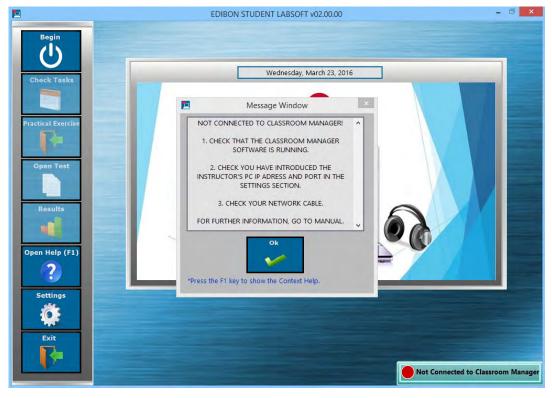
# 2.9. Operating Modes: LOCAL and LAN Program Package

The Operating Modes Program Package includes the following modules:

### 2.9.1. LOCAL Mode:

- Available EDIBON Practical Exercises, Training Tests and Multimedia Resources.
- Available EDIBON formulas and expressions.
- Auto Result Saving. Generated results are saved in a local Database.
- Training Test Results Viewer.
- Available Training Test Explanations.
- Printable Reports.

#### LOCAL MODE: EDIBON Student Labsoft Software Application main screen



## 2.9. Operating Modes: LOCAL and LAN Program Package (continuation)

#### 2.9.2. LAN Mode:

- Available Default Workgroup for Users, provided by EDIBON.
- Available Log-In and Registry for Multiple Users.
- Available EDIBON Scheduled Tasks for Default Workgroup.
- User Progressions for Default Workgroup.
- Task Status Viewer for Default Workgroup.
- User Database.
- Custom Workgroups.
- Custom Scheduled Tasks.
- Task Progression & Status for Registered Users in Classroom Manager Database.
- Custom Practical Exercises.
- Custom Training Tests and Exams.
- Custom Formula & Expression.
- Updatable Multimedia Resources & Contents for Tasks.
- Available Training Test and Exam Explanations.
- All local mode features.



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



C/ Del Agua, 14. Polígono Industrial San José de Valderas. 28918 LEGANÉS. (Madrid). SPAIN. Phone: 34-91-6199363 FAX: 34-91-6198647 E-mail: edibon@edibon.com WEB site: **www.edibon.com** 

lssue: ED02/16 Date: November/2016 **REPRESENTATIVE:**