A. Tutor's Guide

Objective: Presenting a guideline in order to help the tutor in managing the work of his / her students inside the *Moodle* platform

A. Introduction

Dear tutor,

the Training Modules - organized as part of the *128989-CP-1-2006-1-RO-COMENIUS-C21 Project "VccSSe – Virtual Community Collaborating Space for Science Education"* (project co-funded by EU) and grouped by the name: "*Virtual Instrumentation in Science Education*" - have been designed as face-to-face and also on-line training meetings using *Moodle* platform as environment where the scheduled tasks have to be carried out.

You can access this platform by clicking on the *Moodle* icon (on the right sight of the project home page: http://vccsse.ssai.valahia.ro) or typing the address: http://moodle.ssai.valahia.ro.

After this action you must follow some particular steps:

1. Select the right *Course Category* (tutors from Targoviste are choosing TARGOVISTE (RO), tutors from Valladolid are choosing VALLADOLID (ES) etc.) and choose the course:

2. See the course details (name, short presentation, name of administrators, course creator, teachers etc.) and click on the blue-name of the course:

3. Enter your *Username* and *Password*:
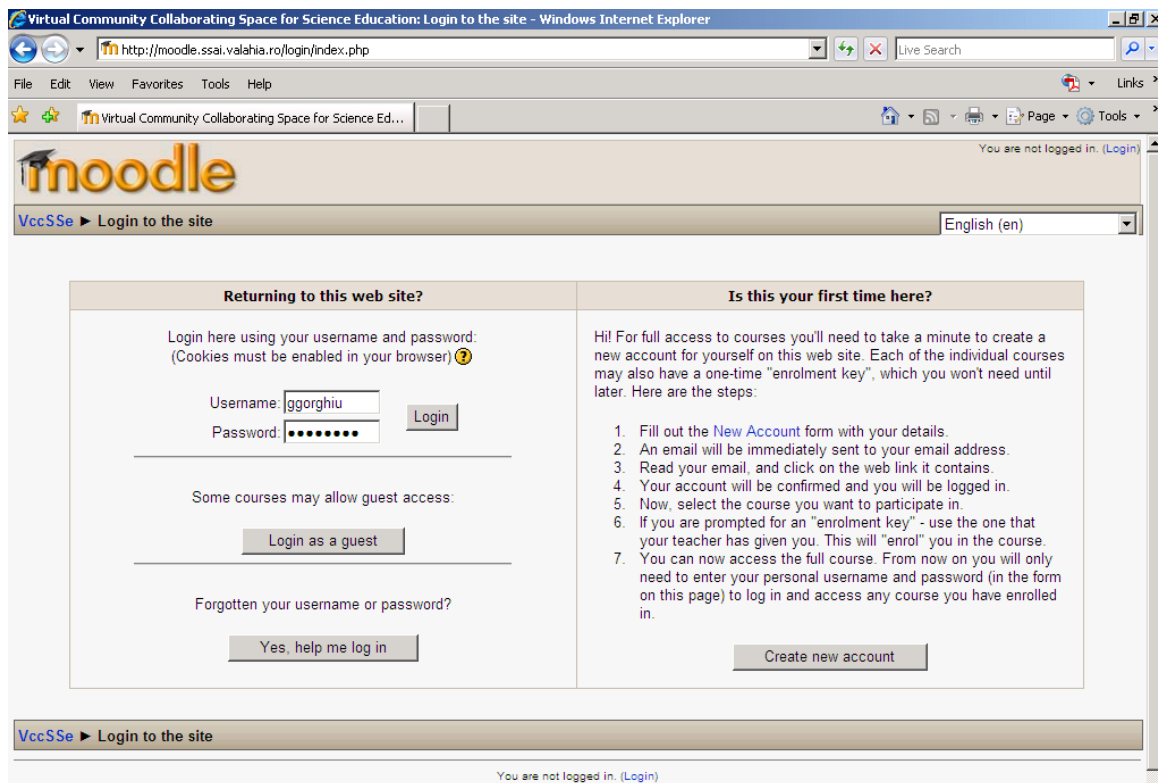
4. At this stage, you can retrieve the course interface:

5. For uploading files, editing or modifying, you must press the button: Turn editing on (English version). Use the lists or the particular icons related to every input in the weekly format. The blue-inputs mean uploaded materials. The black-inputs are labels. When the process of uploading is ready, press the button: Turn editing off (English version).

6. You can find (as model) the organization of the *English version* course Virtual Instrumentation in Science Education (this was just design for demonstration – no students can be registered there!). For the national versions, please upload in your specific space, all the necessary documents in your national language!

It is recommended to upload a *Moodle* Guide in your particular interface. In this way, the students can find out more information about the platform. The Guide is also helpful for those who may need to use the *Moodle* platform in the future.

B. Structure

Inside the *Moodle* platform, the Structure of the Training Modules can be found: 3 Seminars and 3 Laboratories, as follows:

- Seminar 1: Virtual Instrumentation Overview
- Seminar 2: The Basics and Examples of Virtual Instrumentation in Education
- Seminar 3: Teaching Methodologies and Pedagogical Strategies Based on the Using of Virtual Instrumentation
- Laboratory 1: Getting Familiar with VI Tools
- Laboratory 2: Basic Teaching and Learning Activities with VI Tools
- Laboratory 3: Designing Learning Activities which Include VI Applications

All these modules were designed to familiarize the participants with the technology based on Virtual Instruments and to develop teaching methodologies and pedagogical strategies which integrate virtual experiments.

Beside those seminars and laboratories, 3 Training Materials were developed:

- Teaching and Learning with *Cabri Geometry*
- Teaching and Learning with *LabVIEW*
- Teaching and Learning with *Crocodile Clips*

The Training Materials will familiarise the participants with the basic steps on using specific software packages, special designed for creating virtual experiments for Science areas: Mathematics, Physics, Chemistry and other related ones.

It is important to mention that in Seminar 3, a Lesson Template is presented for helping the participants to create the Final Products. Beside that, the participants will use at least one software (and produce one or more virtual experiments) in their product. In this sense, the tutors are asked to make the necessary actions for recording all the students' products which will be organized in a common database and published on the *VccSSe Project web-page*.

Students' opinions, remarks and feed-back will be collected inside two Forums (*Added Value of Virtual Experiments for Effective Science Education* and *Final Discussion*) opened in the middle and at the end of the Training Modules, in the *Moodle* interface. At the same time, the tutors will be kindly asked to assist the students (if necessary) on filling the *Initial* and *Final Evaluation* (from the *Moodle* interface or from the *Project home page* (*Outcomes Section – Assessment Tools*). Please tell to students that their personal data will be confidential and there is no possibility that somebody could recognize them on the basis of their answers afterwards.

Finally, after the implementation of the student's products in the classroom, the tutors will have to direction the students to fill the *Impact in the Classroom Form* and collect and appreciate the pupils feedback stipulated in the *Pupils' Feedback Questionnaire* (also from the *Moodle* interface or from the *Project home page* (*Outcomes Section – Assessment Tools*).

C. Acknowledgements

We would like to thank to all the partners of the *"VccSSe – Virtual Community Collaborating Space for Science Education"* Project for their hard and intensive work on the designing of the original version of the Training Modules and Training Materials. All the materials are the result of this team work and it took almost 6 months. Beside this original English version, 5 national versions are also created: Romanian, Spanish, Polish, Finnish and Greek.

Special mentions have to be made at this moment to those colleagues who designed the Training Modules units and Training Materials (English versions):

- Tutor's Guide: Gabriel GORGHIU (Valahia University Targoviste, Romania) & Adina GLAVA (Babes-Bolyai University of Cluj Napoca, Romania)
- Student''s Guide: Gabriel GORGHIU (Valahia University Targoviste, Romania) & Adina GLAVA (Babes-Bolyai University of Cluj Napoca, Romania)
- Initial Evaluation: Wladyslaw MASIOR & Maria LATKA (Regional In-Service Teacher Training Centre "WOM" in Bielsko-Biała, Poland), Adina & Cătălin GLAVA (Babes-Bolyai University of Cluj Napoca, Romania), Lourdes CABEZA (Teachers Training Centre of Gijón, Spain)

- Seminar 1 - Virtual Instrumentation Overview: Ana-Maria SUDUC, Laura Monica & Gabriel GORGHIU (Valahia University Targoviste, Romania)
- Seminar 2 - The Basics and Examples of Virtual Instrumentation in Education: Javier TAMARGO (Teachers Training Centre of Gijón, Spain), Gabriel GORGHIU (Valahia University Targoviste, Romania), Alicia GARCIA (Teacher Training and Educational Innovation Centre Valladolid II, Spain)
- Seminar 3 - Teaching Methodologies and Pedagogical Strategies Based on the Using of Virtual Instrumentation: Javier TAMARGO & Lourdes CABEZA (Teachers Training Centre of Gijón, Spain)
- Laboratory 1 - Getting Familiar with VI Tools: Adina & Cătălin GLAVA (Babes-Bolyai University of Cluj Napoca, Romania)
- Laboratory 2 - Basic Teaching and Learning Activities with VI Tools: Adina & Cătălin GLAVA (Babes-Bolyai University of Cluj Napoca, Romania)
- Laboratory 3 - Designing Learning Activities which Include VI Applications: Adina & Cătălin GLAVA (Babes-Bolyai University of Cluj Napoca, Romania)
- Training Material 1 - Teaching and Learning with *Cabri Geometry*: Maria KORDAKI & Alexios MASTROGIANNIS (University of Patras, Greece)
- Training Material 2 - Teaching and Learning with *LabVIEW*: Wieslaw TLACZALA (Warsaw University of Technology, Poland)
- Training Material 3 - Teaching and Learning with *Crocodile Clips*: José Luis CEBOLLADA (Teachers Training Centre of Zaragoza 1, Spain), Javier TAMARGO (Teachers Training Centre of Gijón, Spain) & Laura Monica GORGHIU (Valahia University Targoviste, Romania)
- Final Evaluation: Wladyslaw MASIOR & Maria LATKA (Regional In-Service Teacher Training Centre "WOM" in Bielsko-Biała, Poland), Adina & Cătălin GLAVA, (Babes-Bolyai University of Cluj Napoca, Romania), Lourdes CABEZA (Teachers Training Centre of Gijón, Spain)

Yet, the Final Form of all the materials developed in the frame of the project was impossible to be designed without the contribution of all the colleagues!

Thank you all and Good Luck!