

Project 2011-1-RO1-LEO05-15321 (Contract LLP-LdV/Tol/2011/RO/008)  
A web-based e-training platform for Extended Human Motion Investigation in  
Orthopedics ORTHO-eMAN

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# User/Trainee Guide for ORTHO-eMAN e-learning platform

**[www.ortho-eman.ro](http://www.ortho-eman.ro)**

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[www.ortho-eman.ro](http://www.ortho-eman.ro) = ORTHO-eMAN project web site

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## **1 Introduction**

## **2 Software Requirements**

The OrthoEMan plugin and its modules have been developed with the newest W3C standards in mind in order to provide a modern experience to all faculty members including both the teacher and the students. Thus any HTML5 compatible browser should be enough for working with the OrthoEMan plugin. Furthermore the plugin has been explicitly tested with

- Firefox 19
- Chrome 23
- Internet Explorer 10

It is strongly advised to keep the computer which will access to the OrthoEMan facility in good shape with the latest updates applied.

## **3 Entering Moodle**

The e-learning platform (Moodle) will be finally hosted at [www.orthoe-eman.ro](http://www.orthoe-eman.ro).

You can access the OrthoEMan's project development moodle site you have to startup your browser and visit the above URL. It should look like the picture below.

## Menu

[Home](#)
[What is ORTHO-eMAN?](#)
[Partners](#)
[Results](#)
[E-learning center](#)
[Dissemination](#)
[E-learning in bioengineering](#)
[News and events](#)
[Questionnaires](#)
[FAQ](#)
[Links](#)
[Forum](#)
[Contact](#)

Moodle


LLP - Leonardo da Vinci - Transfer of Innovation  
Project title: A web-based e-training platform for Extended Human Motion Investigation in Orthopedics  
Project acronym: ORTHO-eMAN  
Project nr. 2011-1-RO1-LEO05-15321  
PROMOTER: University of Craiova - Romania  
COORDINATOR: Dorin Popescu

KICK OFF MEETING 10-11 February 2012, CRAIOVA, ROMANIA



**Click on “E-learning center” to access the e-learning platform/center.**

You will see the next window:



Home

### Navigation

- Home
- Site news
- Courses

### Main menu

- Site news

### Courses

- ORTHO-eMAN - Human motion analysis
  - Human motion analysis - course for medical staff
  - Human motion analysis - course for engineers



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On this page you have to select which type of course you want: for medical staff or for engineers.  
If you select the course for medical staff you will see the next window:


The screenshot shows the Moodle interface for the 'ORTHO-eMAN - Human motion analysis' course. The navigation menu on the left includes 'Home', 'Site news', 'Courses', and 'Human motion analysis - course for medical staff'. The main content area displays the course categories and a search bar. The course categories are listed as 'ORTHO-eMAN - Human motion analysis / Human motion analysis - course for medical staff'. The search bar contains the text 'Human motion analysis - course for medical staff'. The sub-categories are listed as 'English', 'Spanish', 'Romanian', and 'Greek'.

Now you can select your desired module. For example, for Module 1 (as medical staff) you will see the next window (a similar one for engineers):

The screenshot shows the Moodle interface for the 'Module 1 - Physics of the human body motion' course. The navigation menu on the left includes 'Home', 'Site news', 'Courses', and 'Module 1 - Physics of the human body motion'. The main content area displays the course categories and a search bar. The course categories are listed as 'ORTHO-eMAN - Human motion analysis / Human motion analysis - course for medical staff / English / Module 1 - Physics of the human body motion'. The search bar contains the text 'Module 1 - Physics of the human body motion - Course in English'. The sub-modules are listed as 'Sub-module 1-1 EN', 'Sub-module 1-2 EN', and 'Sub-module 1-3 EN'. The sub-module 1-1 EN is described as 'Basic knowledge compulsory to study the human body motion like statics, kinematics, dynamics = Course in English'. The sub-module 1-2 EN is described as 'Basic knowledge on material strength and elasticity theory compulsory to study the human body motion like stress, strain, deformations, etc. = Course in English'. The sub-module 1-3 EN is described as 'Basic knowledge on materials and biomaterials properties = Course in English'.

If you choose a sub-module you have to login to the e-learning platform. Note that if you are not already registered with the system you will be given (in the right side) the opportunity to register. In the registration form you need to fill your name, surname and e-mail address. There are more elements of information that you can add at a later stage like detailed contact info in social networks and such.

The system will sent you an e-mail at the address you gave and you have to follow the instructions in order to complete your registration.


You are not logged in.

**Returning to this web site?**

Login here using your username and password  
(Cookies must be enabled in your browser)

Your session has timed out. Please login again.

Username

Password

☒ Remember username

Forgotten your username or password?

Some courses may allow guest access

**Is this your first time here?**


Hi! For full access to courses you'll need to take a minute to create a new account for yourself on this web site. Each of the individual courses may also have a one-time "enrolment key", which you won't need until later. Here are the steps:

1. Fill out the New Account form with your details.
2. An email will be immediately sent to your email address.
3. Read your email, and click on the web link it contains.
4. Your account will be confirmed and you will be logged in.
5. Now, select the course you want to participate in.
6. If you are prompted for an "enrolment key" - use the one that your teacher has given you. This will "enrol" you in the course.
7. You can now access the full course. From now on you will only need to enter your personal username and password (in the form on this page) to log in and access any course you have enrolled in.

To gain access to the resources and tools you have first to log in. Type your user name and password in the corresponding fields and press Enter.

If you don't remember your password, click on the link "Forgotten your username or password?" which redirects you to the next page.

To reset your password, submit your username or your email address below. If we can find you in the database, an email will be sent to your email address, with instructions how to get access again.



Home > Login > Forgotten password

To reset your password, submit your username or your email address below. If we can find you in the database, an email will be sent to your email address, with instructions how to get access again.

**Navigation**

- Home
- Site news
- Courses

**Search by username**

Username

**Search by email address**

Email address

After a successful login the page redirects you to the "My Courses" page. To enter the course just click on its name. However if this is your first time in moodle it is possible that "My Courses" is empty. After your registration and login you can proceed to enroll your self to the various offered courses.

The self enrollment procedure is very simple but you will need on enrollment key per course. The enrollment keys are one time passwords in order to confirm that you have the credentials to take that course. The enrollment keys must be distributed by your teacher either in person or via electronic means.

Click on the course you wish to enroll yourself. The following picture will appear (if you haven't already enrolled yourself).

**Enrolment options**

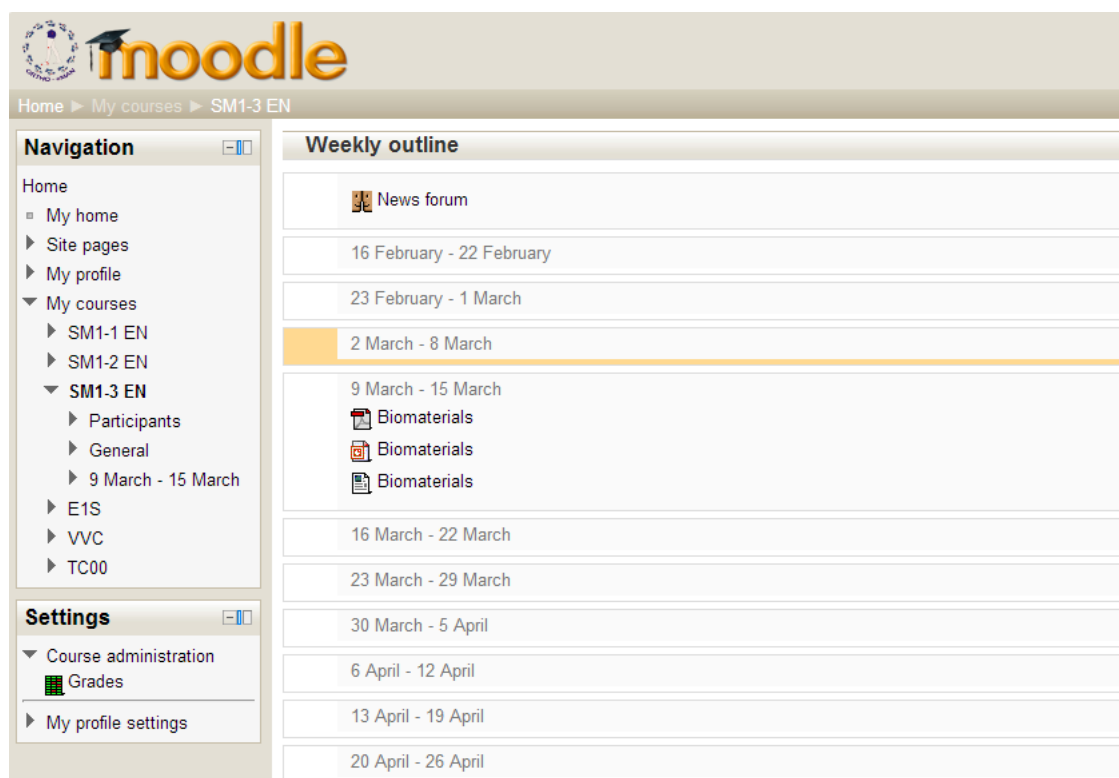
Module E1 - Sub-module 1-1 = [Basic knowledge compulsory to study the human body motion like statics, kinematics, dynamics](#) = Course in English

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**SM E1-1 EN**

Enrolment key  ☐ Unmask

After a successful self enrollment you can enter the course



The screenshot shows the Moodle interface for the course 'SM1-3 EN'. The left sidebar contains a 'Navigation' menu with links to Home, My home, Site pages, My profile, My courses (including SM1-1 EN, SM1-2 EN, and SM1-3 EN), and Settings (including Course administration, Grades, and My profile settings). The main content area displays a 'Weekly outline' with a list of dates and activities. The current week, '2 March - 8 March', is highlighted in orange and shows three 'Biomaterials' activities. Other weeks listed include '16 February - 22 February', '23 February - 1 March', '9 March - 15 March', '16 March - 22 March', '23 March - 29 March', '30 March - 5 April', '6 April - 12 April', '13 April - 19 April', and '20 April - 26 April'.

In this example where you choose sub-module 1-3, the schedule of it is one week from March and you can see for this sub-module the lecture notes (a brief presentation of this sub-module), this specific course (as pdf file) and a small quiz for self-testing (after you have learned this subject).

In this example you can see a weekly outline with one OrthoEMan activity. The outline of the course, meaning the way the time slots are allocated, is entirely decision of the course creator. The course creator depending on the administrator may be different than the course author (editing teacher).

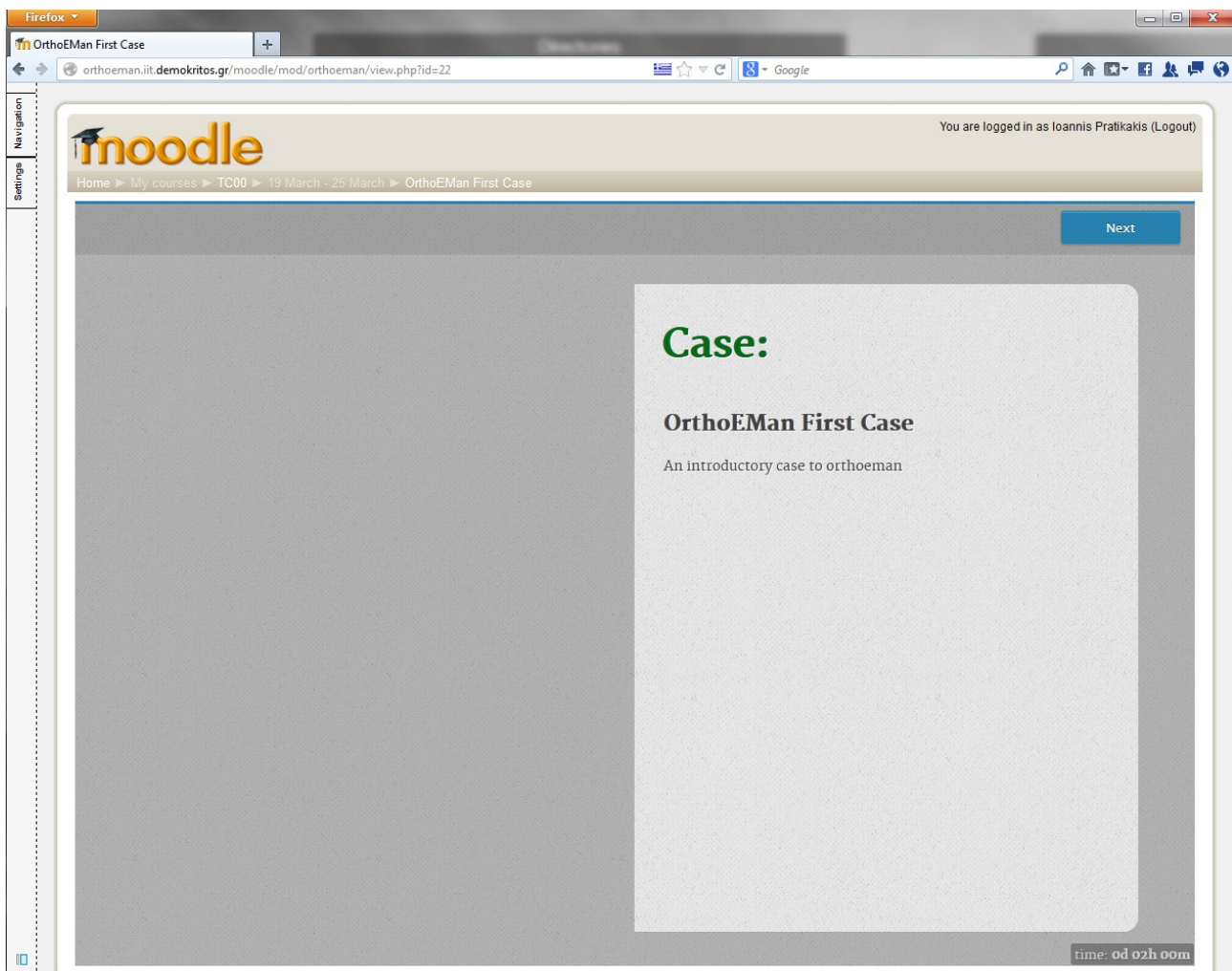


## 4 Display Tool

The **Display Tool** is the main interface point with the student. The student evokes the Display Tool by just selecting the appropriate lesson.

### 4.1 First Contact

The title and the case's description that are displayed in the initial screen of the **Display Tool** have been entered in case configuration page as it is illustrated at Illustration Error: Reference source not found.



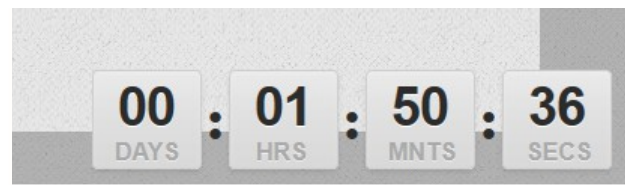
*Illustration 1: Display Tool: First Contact*



The student can navigate between pages by using the buttons on the upper part of the screen. The clock that shows the remaining time for the lesson completion is displayed in the lower-right part of the screen. It has two mode: the compact mode which it is the default and the expanded mode which it is evoked by clicking the compact clock. Illustration 2(a) and 2(b) shows these two clock versions.



(a)



(b)

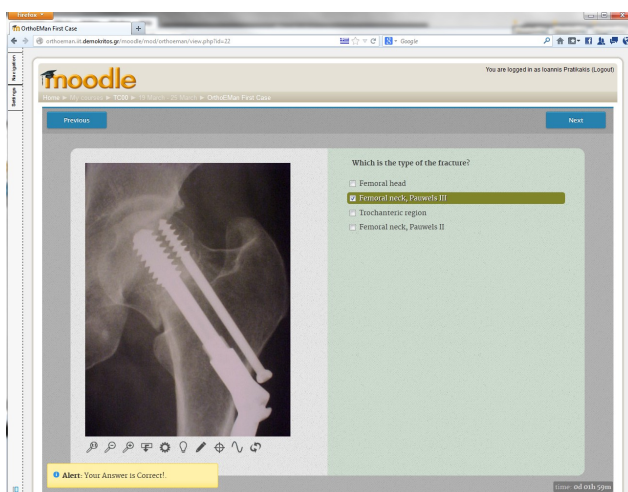
*Illustration 2: Clock showing the remaining time until the lesson completion  
(a) compact version (b) expanded version*

## 4.2 Pages Type

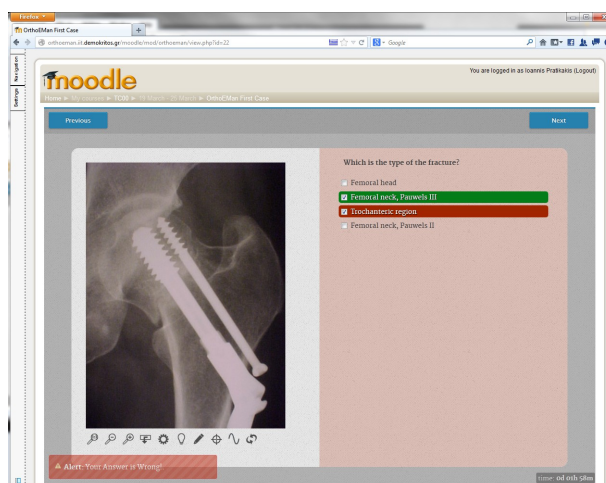
A lesson consists of a collection of pages as section Error: Reference source not found describes. Each page may contain theory or questions towards the students. The pages that are compose of questions expect feedback from the student. Depending of the page type the answers are ranging from selecting the correct hotspots in an image to picking up the correct phrases(quiz). Then, the Display Tool informs the student if his answer is correct or wrong (Illustration Error: Reference source not found(a) and Error: Reference source not found(b)). The Display Tool may provide the correct answer if the student answer it wrong but only by the teacher consent.



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(a)



(b)

*Illustration 3: Responses to the students answers (a) response to a correct answer (b) response to a wrong answer*

#### 4.2.1 Image – Text

The **Image – Text** page type is used to present theory pages which they contain just an image and text. Moreover, it may used for hotspot identification by the students.



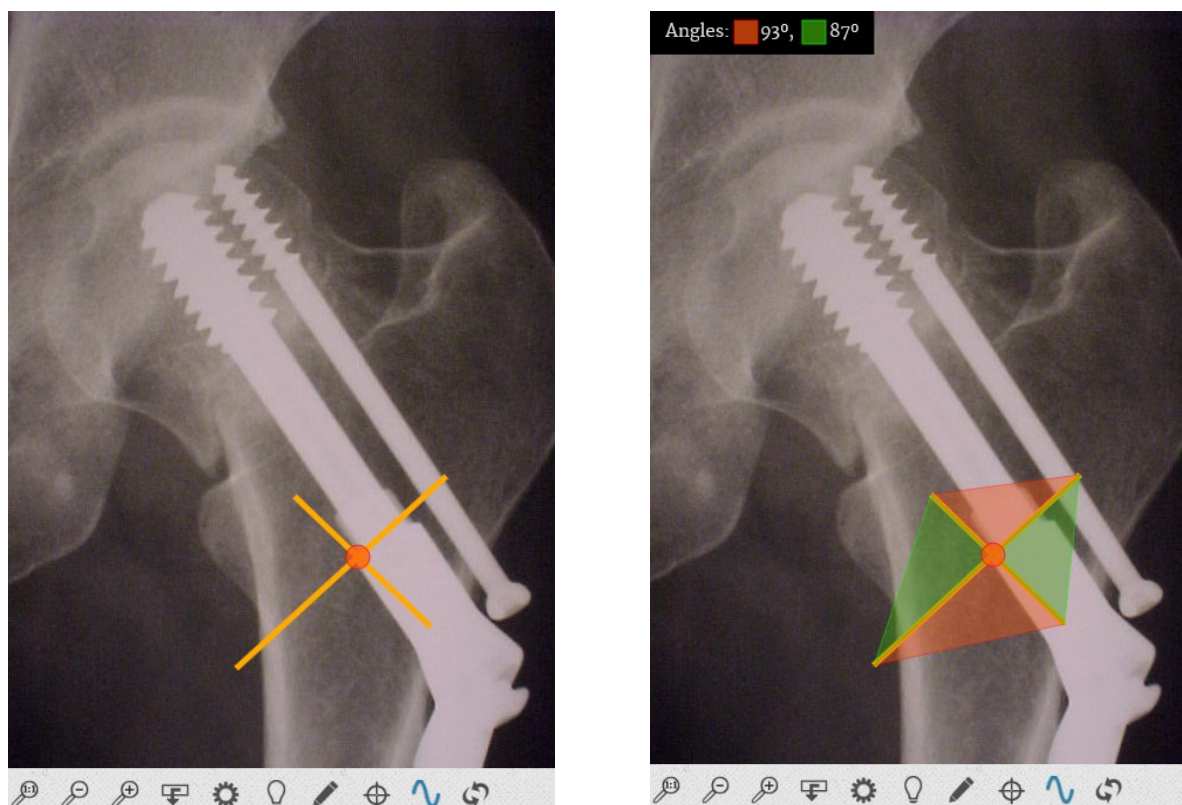
*Illustration 4: Image Tools*

When a page contains an image, the student has in his disposal a number of tools in order to manipulate the image to help him answer the question. Illustration 4 depicts those tools. From left to right:

- **1-1:** Removes zooming scaling. Resets images dimensions to the original values.
- **Zoom In:** Zooms in by 20%.
- **Zoom Out:** Zooms out by 20%.
- **Invert:** Invert the image colors.
- **Brightness:** Change the image brightness.
- **Contrast:** Change the image contrast.
- **Hotspot Selector:** By pressing this button, the student will be able to

create points in the image suitable for the hotspot identification questions.

- **Crosshair Tool:** Draws a crosshair tool across the image.
- **Line:** Draws a line. Lines are helper elements for the students and they are painted with a yellow pen. If multiple lines are drawn and the mouse hovers over an intersection the automatic angle calculation tool kicks in and displays the angle in degrees (Illustration 5).
- **Reset:** Resets the image to original state. Removes the Brightness/Contrast and Invert effects.

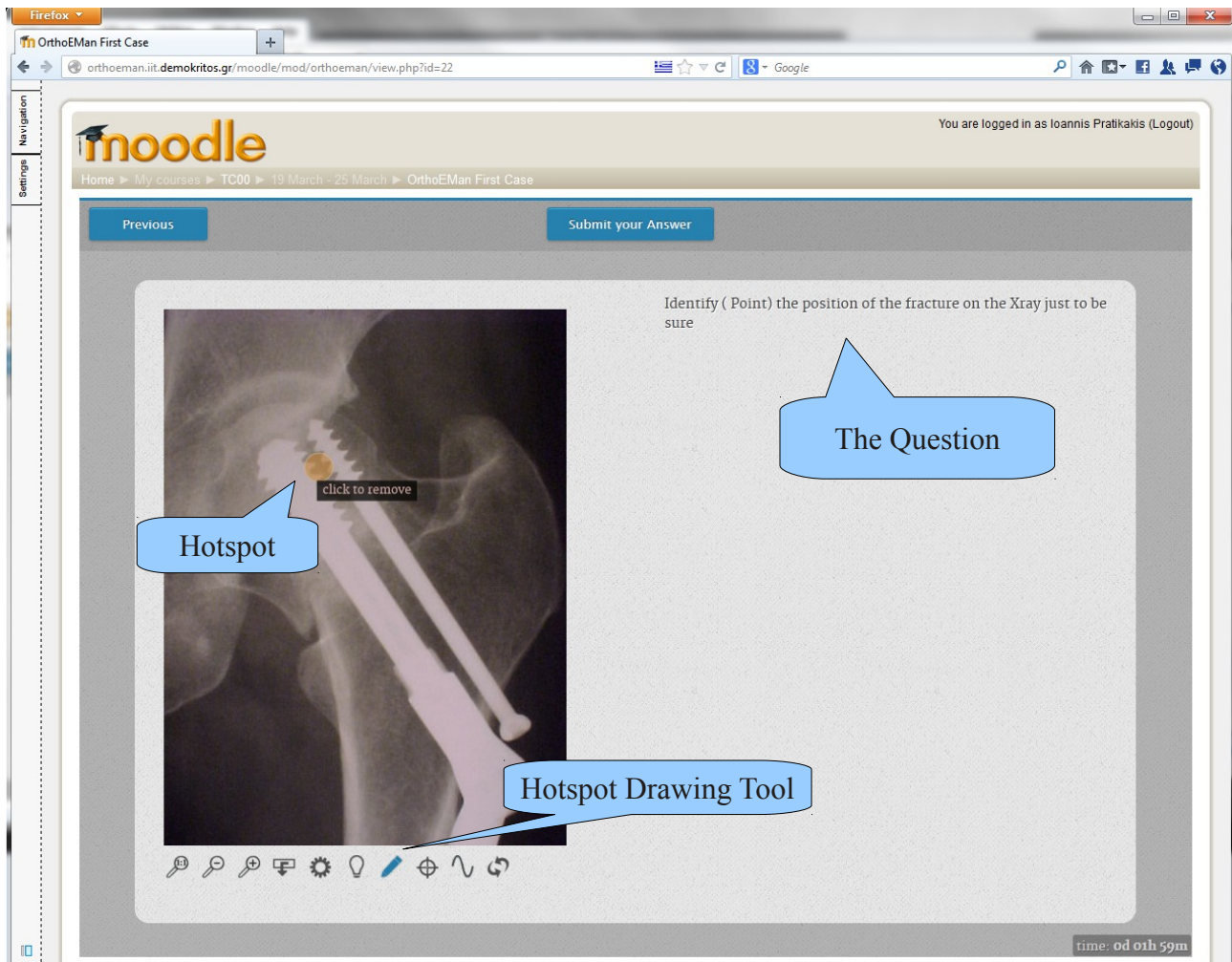


*Illustration 5: Line drawing and angle calculation*

The Illustration 6 shows the **image – text** page type when involves hotspot identification. The student by pressing the **Hotspot Drawing Tool** must point in the image the correct area. The number of required hotspots are defined from the question. The hotspot can be deleted by hovering the mouse cursor



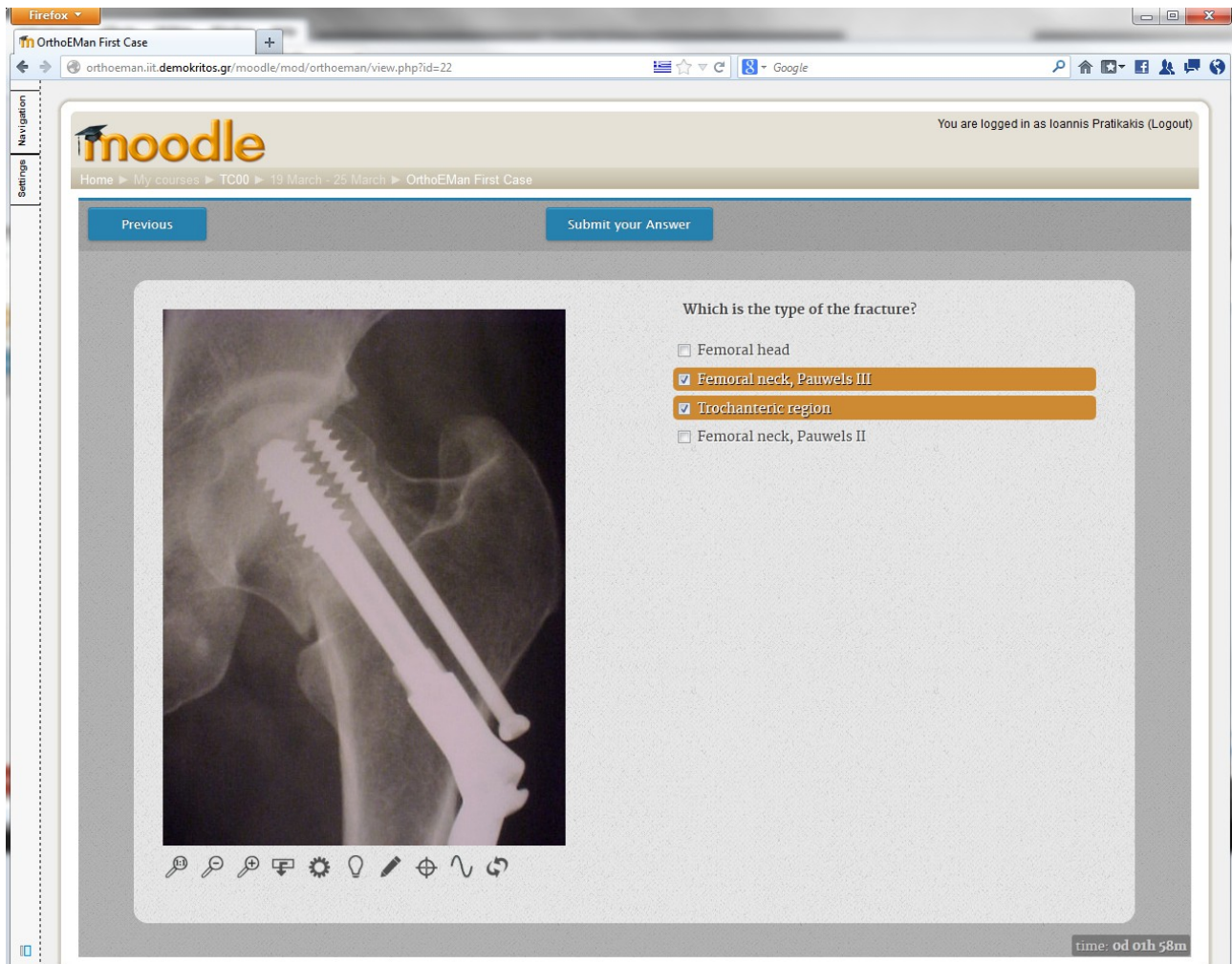
over it and pressing the left button. When the required hotspots are created by the student, the “Submit your Answer” button appears and the answer is ready to be send.



*Illustration 6: Image - Text*

#### 4.2.2 Image – Quiz

The image below (Illustration 7) shows how **Display Tool** illustrates the **Image – Quiz** page type. The student can select one or more choices from the available answers. When at least one answer is selected, a button labeled “Submit your Answer” will appear. The student by pressing this button, he submit his answer.



*Illustration 7: Image - Quiz*

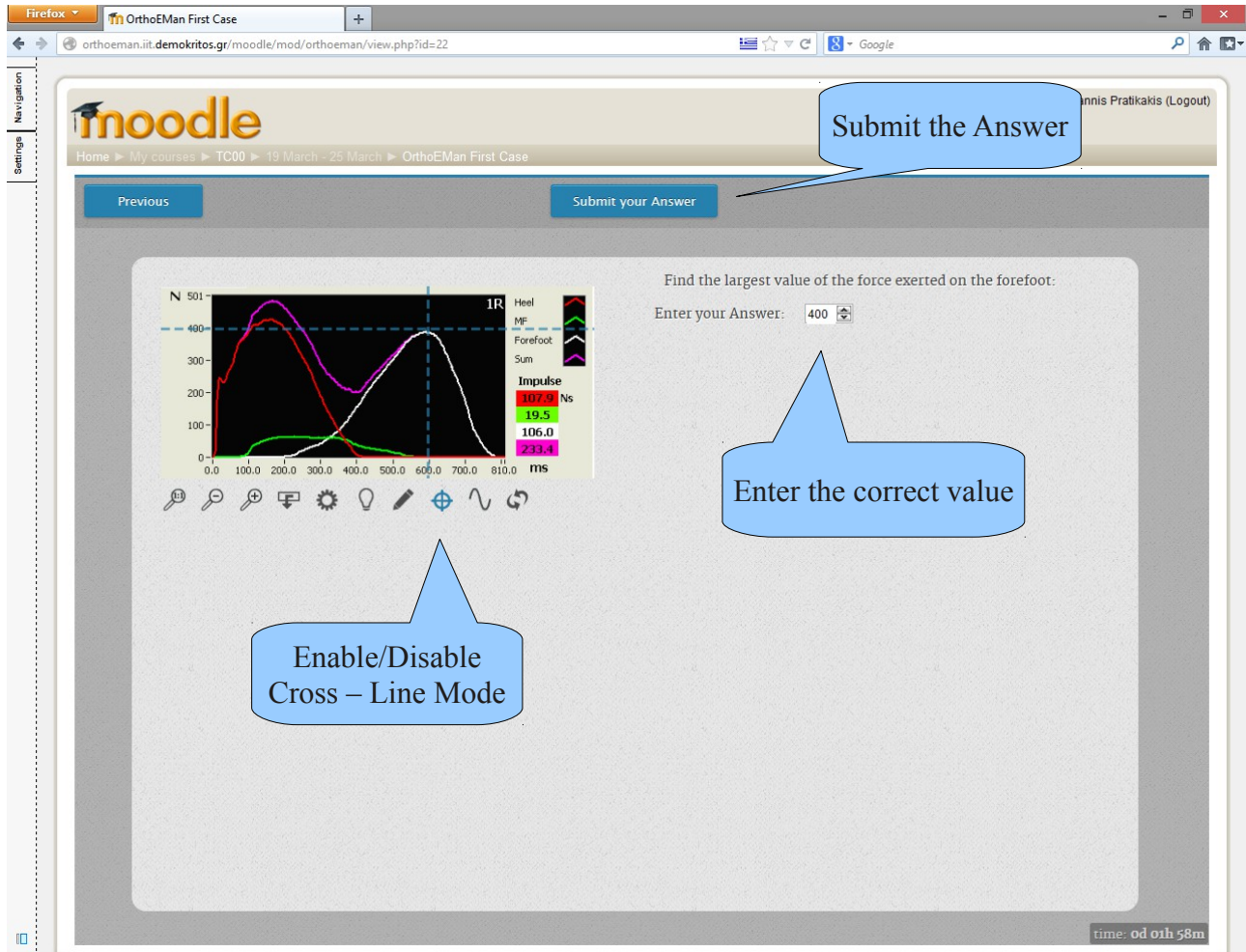
#### 4.2.3 Image – Range Quiz

The **Image – Range Quiz** page type requires the student to submit a value by studying the associate image and deduce from it the correct answer. He has in his disposal all the image tools that are described earlier (including the cross-line mode) to figure out the answer. When he enters a value the “Submit your Answer” button appears so that he may submit it.

#### 4.2.4 Video – Text

The **Video – Text** page type is used only for theory and not for student's evaluation. It is not requires any action from the student. The authoring teacher

provides a video and a text that highlights the more relevant points of it.



Submit the Answer

Submit your Answer

Find the largest value of the force exerted on the forefoot:

Enter your Answer: 400

Enter the correct value

Enable/Disable Cross – Line Mode

time: 0d 01h 58m

Illustration 8: Image – Range Quiz

#### 4.2.5 Video – Quiz

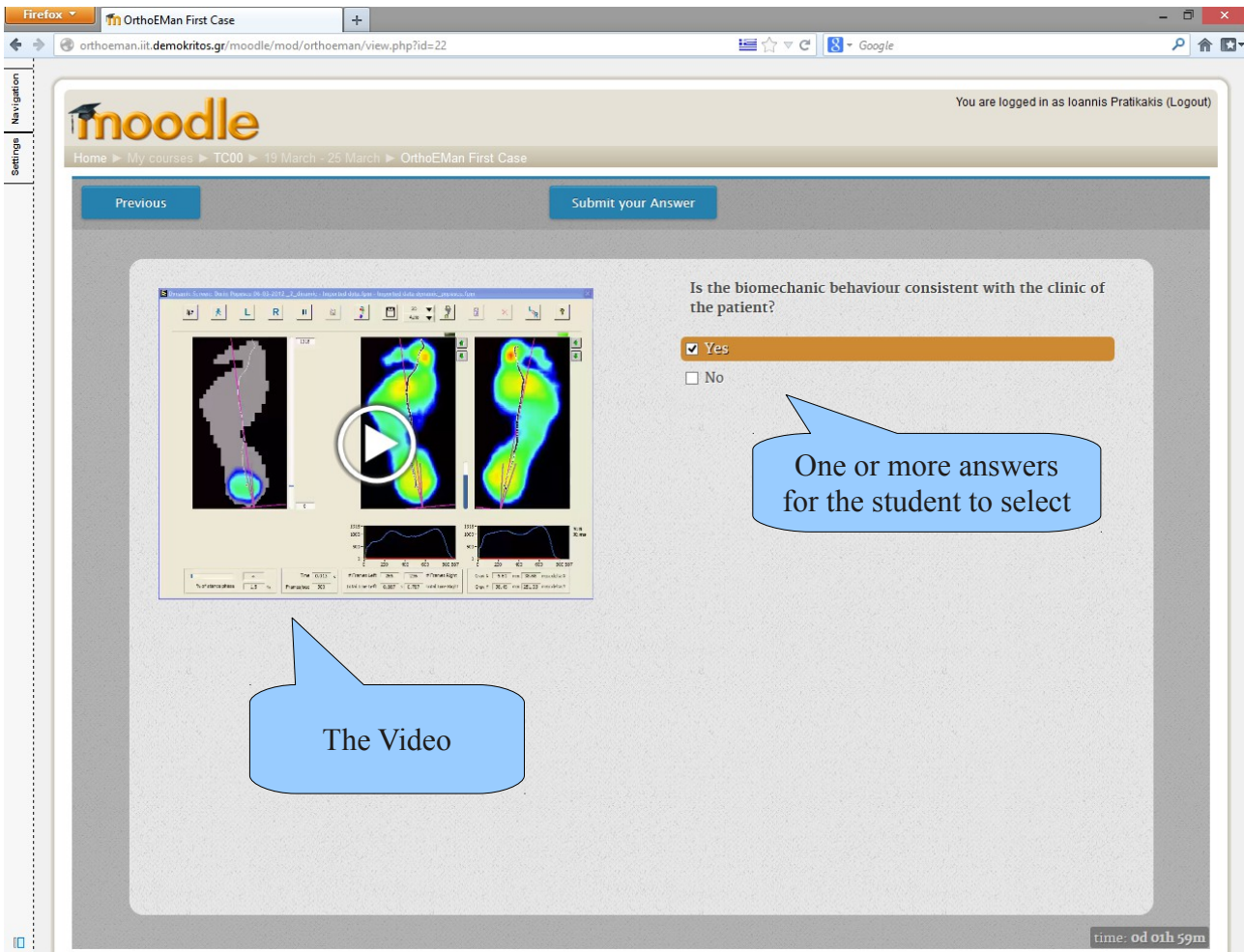
The **Video – Quiz** page type is like the Image – Quiz, where instead of an image there is a video. The student can watch the accompany video and then, he must select one or more choices from the available answers. When at least one answer is selected, a button labeled “Submit your Answer” will appear. The student by pressing this button, he submit his answer.

#### 4.2.6 Text – Quiz

The Text – Quiz page type is a classic non-multimedia quiz where the student



reads the question and the accompany theory and selects one or more answers from the provided answers.



Firefox OrthoEMan First Case  
orthoeman.iit.demokritos.gr/moodle/mod/orthoeman/view.php?id=22

You are logged in as Ioannis Pratikakis (Logout)

moodle

Home ▶ My courses ▶ TC00 ▶ 19 March - 25 March ▶ OrthoEMan First Case

Previous Submit your Answer

Is the biomechanic behaviour consistent with the clinic of the patient?

☒ Yes  
☐ No

The Video

One or more answers for the student to select

time: 0d 01h 59m

Illustration 9: Video – Quiz