

EINFOSE

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INTELLECTUAL OUTPUT O3 - "EVALUATION FRAMEWORK"

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Accessibility evaluation of the EINFOSE Platform

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1. Introduction

This report summarizes the results of the accessibility evaluation of the EINFOSE Platform, as it stood on July, 2017.

In accordance with [Web Accessibility Initiative \(www.w3.org/WAI/intro/accessibility\)](http://www.w3.org/WAI/intro/accessibility), "Web accessibility means that people with disabilities can use the Web. More specifically, Web accessibility means that people with disabilities can perceive, understand, navigate, and interact with the Web, and that they can contribute to the Web. Web accessibility also benefits others, including older people with changing abilities due to aging."

Two methods have been applied for the evaluation:

- Observation of the behaviour of key components of the platform.
- Application of an automatic evaluation tool, [aXe \(chrome.google.com/webstore/detail/axe/lhdoppojpmngadmndnejfpokejbd\)](https://chrome.google.com/webstore/detail/axe/lhdoppojpmngadmndnejfpokejbd) (Version 2.0.2).

The evaluation checks if the platform accomplish with the Web Content Accessibility Guidelines (WCAG) provided by the Web Accessibility Initiative (WAI) which belongs to World Wide Web Consortium (W3C). It follows the WAI standards, which consider all disabilities.

Also, this evaluation should be complemented with a User Evaluation, a complementary evaluation which presents the results obtained by the use of the platform, accomplished by users with disabilities.

The report is divided into three sections:

- Section 2 summarizes main disabilities accessible web sites are devoted to.
- Section 3 summarizes main results of the accessibility evaluation.
- In addition, a final Annex is provided including further details of the evaluation performed with aXe tool.

2. Who does web accessibility affect?

2.1. Students with visual disabilities

There are three major groups of students with visual disabilities:

- Blind people who cannot interact by sight.
- People with partial blindness, who usually interact with the computer through colour changes or by magnifying glass tool.
- Colour blind people, with different profiles.

In general, main resources to face visual disabilities are:

- Textual equivalents to visual elements. Example: images might be explained with text.
- The colour contrast.

Most often used technical aids are:

- Magnifiers or screen amplifiers. There is specific software for magnifying glass and, in addition, the operating systems offer a service like this.
- Screen readers. They are software that reads the screen.
- Tools to change the display of screen elements.
- Braille lines.

2.2. Students with hearing impairments

There are two major groups:

- Deaf people cannot hear anything.

There is a very important distinction between people who have learned to speak and those who do not.

- Pre-locutives: they have been very difficult to have learned the language in a natural way and usually have deficiencies with all learning of the language.
- Post-locutives: they learned to speak and, therefore, they master the language.

There is also a distinction between:

- Lipsreaders: they can read lips and speak.
- Signers: as they use sign language, they are not considered disabled people, but a cultural community.
- People with hearing difficulties: they are accustomed to solve impairments with headphones or the like.

Above all, it is a disability that affects audio-visual content.

- In developed countries, deaf people have a very good reading and writing level.
- Deaf people do not receive sound inputs, so they have difficulties to apprehending the environment.

Most often used technical aids are:

- Automatic translators: they present problems in language translations.
- Avatars with sign language.

Accessible digital content should include the following features:

- Multimodal communication: notices and sound communications must also be provided by text.
- Subtitled videos: According to current international regulations, videos have to collect in text all the audio content (not just the dialogues).
- Signed videos: in addition to the video appears a person signalling all the auditory content (not just the dialogues).
- Videos with background sound as a differentiated track.
- Easy language: text adaptation, simplifying vocabulary and grammar, to make it more understandable. It is suitable for certain degrees of functional illiteracy.

2.3. Students with motor disabilities

- Motor disabilities are those that affect the proper mobility of people, such as muscular dystrophy (weakness and progressive deterioration of skeletal muscles used during voluntary movement), muscle dystonia (permanent involuntary contractions of muscles), or disease of Parkinson's disease.
- These disabilities lead to motor deficiencies, related to the mobility of the user, such as difficulty in using hands, tremors, slow muscle, etc.

2.4. Students with cognitive disabilities

- Cognitive disabilities include autism, dysphasia, Down syndrome, Asperger syndrome and Fragile X syndrome, among others.
- It is understood to be a set of conditions that affect the intellectual development and/or social adaptation of some people.
- Among the difficulties associated to the cognitive disabilities are the psycholinguistic ones and the logical thinking ones.
- According to Howard Gardner's theory, people with cognitive disabilities would have difficulties mainly in the development of verbal and mathematical intelligence, while in most cases they retain intact their other intelligences, namely: artistic, musical, interpersonal, and intrapersonal.
- Accessibility conditions for this group:
 - It is the group of users less studied within the framework of the accessibility guidelines.

- Improving web accessibility for this type of user implies improving accessibility for all other types.
- Emphasis is placed on the processing of information:
 - It is essential to adequately define the contents and structure of the information to allow an intuitive reading with a logical order.
 - Simple, clear and direct language should be used as much as possible.
 - Avoid tangential, extraneous or non-relevant information.
- The treatment of the main areas that addresses accessibility for users with learning disabilities or cognitive disabilities have a positive impact on the design and elaboration of digital content accessible to all audiences. These areas can be summarized as follows:
 - Short and long term memory.
 - Troubleshooting.
 - Attention.
 - Reading, linguistic and verbal comprehension.
 - Mathematical understanding.
 - Visual comprehension.
- Accessibility features that must be present in digital content for users with learning disabilities or cognitive disabilities:
 - Colour contrasts and large text sizes.
 - Do not use moving pictures to avoid distractions.
 - Do not use uppercase or italic letters.
 - Use short sentences that contain only one idea.
 - Combine the use of images and texts to complement the content.
- Accessibility features that must be present on websites for users with learning disabilities or cognitive disabilities:
 - Marked emphasis on easy navigation.
 - Simple design with consistent navigation.
 - Text size adjusted to various levels without affecting page layout.
 - Short, short course menu options.

3. Results - What did we find?

After the accessibility evaluation of the EINFOSE e-learning tool, based on the CMS Moodle, it can be concluded the following: Moodle does not accomplish with the level A of the WCAG 2.0 guidelines at least.

3.1. Elements must have sufficient colour contrast

Another problem detected is about that all text elements must have sufficient contrast between text in the foreground and background colours behind it in accordance with WCAG 2 AA contrast ratio thresholds.

This is important because some people with low vision experience low contrast, meaning that there aren't very many bright or dark areas. Everything tends to appear about the same brightness, which makes it hard to distinguish outlines, borders, edges, and details. Text that is too close in luminance (brightness) to the background can be hard to read.

To fix the problem ensure all text elements have sufficient colour contrast between the text in the foreground and background colour behind it. Use the colour contrast analyser below to find colours that pass the guidelines, the WCAG 2 AA contrast ratio thresholds.

- Compliance Data & User Impact
 - User Impact: Serious
- Disabilities Affected:
 - Low Vision
 - Colour-blindness
- Issue Type:
 - WCAG 2.0 (AA): MUST
- WCAG Success Criteria:
 - 1.4.3 Contrast (Minimum)
- Section 508 Guidelines:
 - 1194.21 (j) Colour and contrast range

3.2. Links must have discernible text

According to the rule [“Links must have discernible text” \(dequeuniversity.com/rules/axe/1.1/link-name\)](https://dequeuniversity.com/rules/axe/1.1/link-name) in aXe: “Links must have discernible text, notes that the link text (and alternate text for images, when used as links) must be discernible by a screen reader, must not have a duplicate label, and must be focusable”. To solve this problem ensures that every link has an accessible name.

This is important because inaccessible link elements pose great barriers to accessibility, as they are a fundamental component of a website.

Users who rely exclusively on a keyboard (and no mouse) to navigate a webpage can only click on links that can receive programmatic focus. If a link cannot receive programmatic focus, it will be inaccessible to these users.

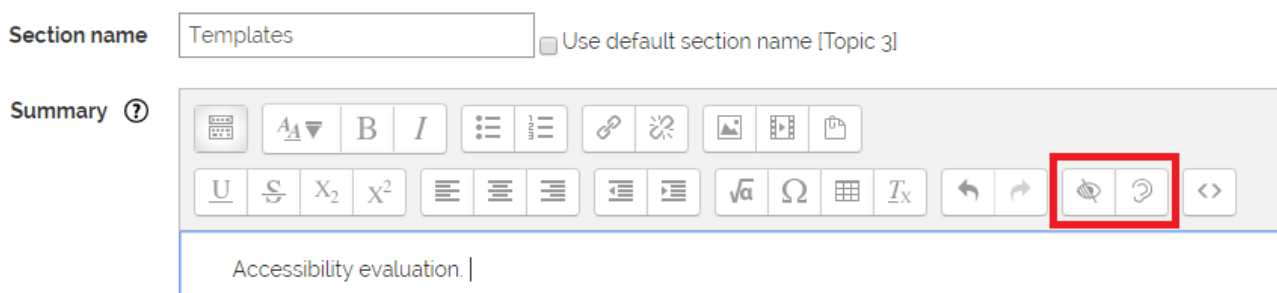
To fix the problem ensure that all link names are accessible. It may be possible that the inner link text is not visible to a screen reader, that there are duplicate link labels, or that the link is not focusable.

Ensure all links can receive programmatic focus; for example, avoid device specific events (e.g. onmouseover).

- Compliance Data & User Impact
 - User Impact: Critical
 - Disabilities Affected:
 - Blindness
 - Deaf blindness
 - Mobility/Dexterity
 - Issue Type:
 - WCAG 2.0 (A): MUST
 - Section 508: MUST
 - WCAG Success Criteria:
 - 1.1.1 Non-text Content
 - 4.1.2 Name, Role, Value
 - Section 508 Guidelines:
 - 1194.22 (a) Text equivalent for non-text elements

Besides, for the editors, EINFOSE platform have an integrated editor with two accessibility features:

1. Accessibility checker.
2. Screenreader helper.



3.3. ARIA attributes must conform to valid names

The final important problem detected is about that ARIA attributes must have valid names. This referring to a misspelled attribute or to one that does not exist will result in an invalid attribute and thus failure of this rule.

This is important because if the developer uses a non-existent or misspelled ARIA attribute, the attribute will not be able to perform the accessibility function intended by the developer.

To fix this problem through this rule checks for the presence of an unrecognized ARIA attribute, this prevents the attribute from functioning as intended.

Ensure all ARIA attributes (as opposed to the values inside of them) used are spelled correctly and correspond to valid ARIA attribute names.

- Compliance Data & User Impact
 - User Impact: High
 - Disabilities Affected:
 - Blindness
 - Deaf blindness

- Mobility/Dexterity
- Issue Type:
 - WCAG 2.0 (A): MUST
- WCAG Success Criteria:
 - 4.1.1 Parsing

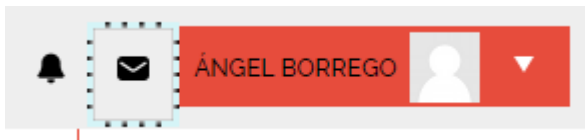
Annex. Evaluation results in details

Evaluation results summary

- CMS: Moodle
- URL: <http://einfose.ffos.hr/platform/>
- User: aborrego
- Evaluation tool: aXe
- Results resume
 - Violations found → 45
 - Needs review → 8

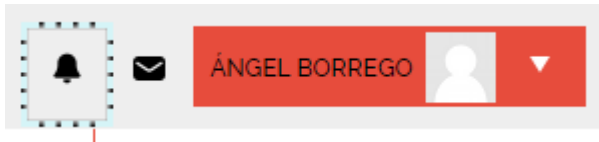
Issue: ARIA attributes must conform to valid names 1/2

- Issue description: Ensures attributes that begin with aria- are valid ARIA attributes
- Impact: critical ([Learn more](#))
- Element location: #yui_3_17_2_1_1502299624610_251
- Element source
 - `<div class="popover-region-toggle nav-link" data-region="popover-region-toggle" aria-role="button" aria-controls="popover-region-container-598b45ee00b46598b45edec06622" aria-haspopup="true" aria-label="Show message window with no new messages" tabindex="0" id="yui_3_17_2_1_1502299624610_251">`
- To solve this violation, you need to:
 - Fix the following:
 - Invalid ARIA attribute name: aria-role
- Issue tags: category: aria, wcag2a, wcag411
- Highlight element:



Issue: ARIA attributes must conform to valid names 2/2

- Issue description: Ensures attributes that begin with aria- are valid ARIA attributes
- Impact: critical ([Learn more](#))
- Element location: #yui_3_17_2_1_1502299624610_249
- Element source
 - `<div class="popover-region-toggle nav-link" data-region="popover-region-toggle" aria-role="button" aria-controls="popover-region-container-598b45ee01924598b45edec06623" aria-haspopup="true" aria-label="Show notification window with no new notifications" tabindex="0" id="yui_3_17_2_1_1502299624610_249">`
- To solve this violation, you need to:
 - Fix the following:
 - Invalid ARIA attribute name: aria-role
- Issue tags: category: aria, wcag2a, wcag411
- Highlight element:



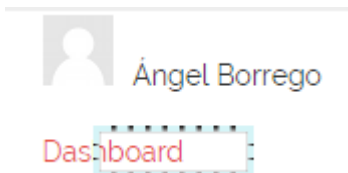
Issue: Elements must have sufficient colour contrast 1/50

- Issue description: Ensures the contrast between foreground and background colours meets WCAG 2 AA contrast ratio thresholds
- Impact: serious ([Learn more](#))
- Element location: #single_select598b45edec06613
- Element source
 - `<select id="single_select598b45edec06613" class="select custom-select autosubmit langmenu" name="lang">`
- To solve this violation, you need to:
 - Fix the following:
 - Element has insufficient color contrast of 4.05 (foreground color: #747474, background color: #eeeeee, font size: 10.5pt, font weight: normal)
- Issue tags: category: color, wcag2aa, wcag143
- Highlight element:



Issue: Elements must have sufficient color contrast 2/50

- Issue description: Ensures the contrast between foreground and background colours meets WCAG 2 AA contrast ratio thresholds
- Impact: serious ([Learn more](#))
- Element location: #page-navbar > .container.clearfix > nav > nav > ul > li > span > a > span
- Element source
 - `Dashboard`
- To solve this violation, you need to:
 - Fix the following:
 - Element has insufficient colour contrast of 3.82 (foreground colour: #e74c3c, background colour: #ffffff, font size: 10.5pt, font weight: normal)
- Issue tags: category: colour, wcag2aa, wcag143
- Highlight element:



Issue: Elements must have sufficient colour contrast 3/50

- Issue description: Ensures the contrast between foreground and background colours meets WCAG 2 AA contrast ratio thresholds

- Impact: serious ([Learn more](#))
- Element location: `div > input[type="submit"]`
- Element source
 - `<input type="submit" value="Customise this page">`
- To solve this violation, you need to:
 - Fix the following:
 - Element has insufficient colour contrast of 3.82 (foreground colour: #ffffff, background colour: #e74c3c, font size: 10.5pt, font weight: normal)
- Issue tags: category: colour, wcag2aa, wcag143
- Highlight element:



Issue: Elements must have sufficient colour contrast 4/50

- Issue description: Ensures the contrast between foreground and background colours meets WCAG 2 AA contrast ratio thresholds
- Impact: serious ([Learn more](#))
- Element location: `#instance-63-header`
- Element source
 - `<h2 id="instance-63-header">Course overview</h2>`
- To solve this violation, you need to:
 - Fix the following:
 - Element has insufficient colour contrast of 3.82 (foreground colour: #e74c3c, background colour: #ffffff, font size: 13.5pt, font weight: bold)
- Issue tags: category: colour, wcag2aa, wcag143
- Highlight element:



Issue: Elements must have sufficient colour contrast 5/50

- Issue description: Ensures the contrast between foreground and background colours meets WCAG 2 AA contrast ratio thresholds
- Impact: serious ([Learn more](#))
- Element location: `#course-4 > .course_title > .title > a`
- Element source
 - `RESEARCH METHODOLOGY IN INFORMATION SCIENCE`
- To solve this violation, you need to:
 - Fix the following:
 - Element has insufficient colour contrast of 3.89 (foreground colour: #0088cc, background colour: #ffffff, font size: 10.5pt, font weight: bold)
- Issue tags: category: colour, wcag2aa, wcag143

- Highlight element:

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Issue: Links must have discernible text 1/1

- Issue description: Ensures links have discernible text
- Impact: serious ([Learn more](#))
- Element location: #yui_3_17_2_1_1502299624610_243
- Element source
 - ``
- To solve this violation, you need to:
 - Fix at least one (1) of these issues:
 - Element does not have text that is visible to screen readers
 - aria-label attribute does not exist or is empty
 - aria-labelledby attribute does not exist, references elements that do not exist or references elements that are empty or not visible
 - Element's default semantics were not overridden with role="presentation"
 - Element's default semantics were not overridden with role="none"
 - And Fix the following:
 - Element is in tab order and does not have accessible text
- Issue tags: category: name-role-value, wcag2a, wcag111, wcag412, wcag244
- Highlight element:



Guidelines number 1: Learning resources consisting mostly in text

Content

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1. Scope of the guidelines

These guidelines are oriented to the creation of learning resources consisting mostly in text, within Microsoft Word or PowerPoint formats. Still images and videos embedded in mostly text documents are discussed in *Guidelines number 2* and *Guidelines number 3*, respectively.

The goal is to make its content accessible to all types of students, even if they have visual disabilities, and need tools like screen magnifiers and voice synthesizers to render them.

2. Language and writing

Write the learning contents using techniques of Plain Language. In particular, apply the following techniques:

- Key information should be given at the beginning and the order of the reverse pyramid should be followed, as in the journalism news.
- Language should be clear and punctuation simple. As far as possible non-standard language abbreviations or symbols should be avoided.
- Sentences should be short and simple. Dense texts should be avoided within reasonable limits in learning material.

3. Format and semantic structure

The following recommendations are to follow both in learning resources and in contents of the EINFOSE platform.

3.1. Fonts, paragraphs and typographic styles

- Use font sizes with a minimum of 12pt for normal text, and superior sizes, clearly differentiated, for headers (16pt, 20pt ...)
- Use families of the San Serif type, with clearer legibility.
- Use a line spacing of 1.5.
- Align left, never right.
- Do not work with columns, or if necessary never make them narrower than 40 characters.
- Use a text colour contrasted with the background colour. To do this, you can check it with the tool [Color Contrast Analyzer \(www.paciello.com/resources/contrastanalyser\)](http://www.paciello.com/resources/contrastanalyser) and verify that the Text Pass (AA) box is validated.
- Underline hyperlinks.

3.2. Language

- Specify the main language of the document. Also specify words or sentences (quotes, loanwords, etc.) in other languages.

3.3. Headers

- Divide documents containing more than two pages into a series of chapters, sections, subsections and paragraphs. In this way navigation through the documents is faster and easier.

- Make the headers to follow a hierarchical structure.

3.4. Lists

- Use bullet lists to mark important points, and number lists to make a sequence.
- Build lists using the suitable style in the office applications.
- End each element in a list with a punctuation mark.

3.5. Tables

- Do not use tables to layout contents.
- Avoid using complex tables; when possible, split them into simple tables with few columns.
- Provide a table summary that clearly and concisely explains the table contents.
- Use table headers for each column.
- Do not modify the table structure once created.

3.6. Related Links

- Avoid using only the destination address of the hyperlink as an identifier when you have to refer to it in a learning resource.
- Identify the link through a description of its landing page, or through the description followed by the destination address in parentheses. When writing the description take into account the following requirements:
 - Make sure it's clear enough to understand its usefulness out of context.
 - Take advantage of the title of the landing page to write the description, if it accurately reflects its content.
 - Avoid using phrases such as "here", "click here", "further information", etc. Opening links in new windows of the browser.
- Avoid opening links in new windows of the browser when clicking a hyperlink.

3.7. Notes

- Avoid including footnotes.
- When including them is necessary, use the utilities provided by the office applications.

3.8. Accessibility checkers

Before completing an MS Word or PowerPoint document, check whether a document has potential accessibility problems, and, if it happens, to correct it. So, use the accessibility checkers provided by office Applications and correct errors if any. To check accessibility issues in any Microsoft Office 2010 software, follow these steps.

1. Click the File tab to access the "Backstage" area of your document.
2. Click the Check for Issues button and select Check Accessibility.
3. This will generate a report with tools to solve the accessibility problems.

4. Metadata

Metadata is information about the content, context, and structure of the text resources, including the digital images and videos embedded in them.

In this section, metadata for the whole text resource are presented. Metadata about images and video files embedded in a text resources are outlined in *Guidelines number 2* and *Guidelines number 3*, respectively.

4.1. Which metadata elements to be populated?

When a Microsoft Word or PowerPoint is created or edited, metadata are automatically created and/or updated; mostly, technical metadata, as general properties of the file system (e.g., file size, or date when it was created or last modified), and statistical metadata (e.g., number of words or characters in a document).

In addition, a bunch of descriptive metadata should be manually added, describing the content and context of the documents (i.e. standard properties in Microsoft Office terminology). Most of these Standard metadata corresponds to the Dublin Core schema. On Table 1, these metadata elements are listed and briefly described.

Metadata element	Comments
Author	A person, an organization, or a service primarily responsible for making the resource.
Title	A name given to the resource.
Subject	Brief identification of the broad subject of the document.
Keywords	The keywords are associated with the document during a search and will effectively rank the document for relevance. The closer your keywords are to the search words the user enters, the higher your document will be rated in the search.
Category	For example, document type from the point of view of function.
Status	For example, draft, review, final ...
Comments	Summary or brief description of the contents of document.

Table 1: Recommended standard metadata elements in MS Word and PowerPoint

4.2. How to populate the metadata elements?

In Microsoft Office 2010, to populated or modify the standard metadata follow these steps.

1. Click the File tab.
2. In the left navigation panel, click the Info category.
3. On the right side of the screen, click the Properties drop-down and choose Show Document Panel.
4. To add or change metadata, write the values on the box linked to each of the metadata elements.
5. Click the File tab again to return to your document. Any changes you made are saved automatically.

Guidelines number 2: Learning resources consisting in still images

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1. What is an Accessible Image?

An accessible still image should get two goals:

- It should be related to and enhance the content to be explained, and provides different modes of access to visual information contained in it.
- It should allow users who use assistive technologies equal access to information provided by an image. Basic alternative mode of access is text/audio description. Nevertheless, there are other modes of access: tactile graphic, donification, smart image, multi-modal access. In the context of this guidelines, we consider the accessibility objective to be met if text/audio description is provided.

2. Recommendations concerning the content of the images

- Images should add to the content but should not be the content.
- Images should provide some kind of added value; so avoid decorative images.
- Visual metaphors should be recognizable and understandable to any user, from any country and culture.
- Specific recommendations for graphics:
 - Make them simple, with clear data.
 - Consolidate composite graphics into a single image, with only one alternative text/audio information.

3. Recommendations concerning technical issues of images

- Use an image editing software such as Adobe Photoshop (commercial) or GIMP (open source).
- Images should be neatly trimmed.
- The images should have a good resolution; 300 dpi is the minimum.
- The images should have a good colour contrast. Check it with one of the following tools:
 - [Color Contrast Analyzer \(www.paciellogroup.com/resources/contrastanalyser/\)](http://www.paciellogroup.com/resources/contrastanalyser/).
 - [Contrast Checker \(webaim.org/resources/contrastchecker/\)](http://webaim.org/resources/contrastchecker/).

4. Recommendations concerning the image file format

There are two main categories of image formats: vector formats and raster formats. Vector formats use lines, points, and polygons to represent an image. On the contrary, raster formats represent an image by encoding the individual values of each pixel within a rectangular grid.

A first decision should be done between these two categories:

- Vector images are ideal for images that consist of geometric shapes. They are zoom and resolution-independent. Within this category, the most recommendable format is SVG (Scalable Vector Graphics), whose filenames extensions are .svg and .svgz.
- Raster images should be used for complex scenes with lots of irregular shapes and details. Within this category, there are different formats to choose, namely GIF (Graphics Interchange Format), JPG/JPEG (Joint Photographic Experts Group), PNG (Portable Network Graphics) and TIF/TIFF (Tagged Image File Format)

Criteria that should be taken into account to select an image file format are:

- What's the colour depth -that is, the number of bits used to indicate the colour of a single pixel?
- Which class of image compression is supported? Two classes are possible:
 - Lossless compression allows the original data to be perfectly reconstructed from the compressed data. Lossless compression is preferred for archival purposes and often for medical imaging, technical drawings, clip art, or comics.
 - Lossy compression permits reconstruction only of an approximation of the original data, though this usually improves compression rates (and therefore reduces file sizes). Lossy methods are especially suitable for natural images such as photographs in applications where minor (sometimes imperceptible) loss of fidelity is acceptable to achieve a substantial reduction in bit rate.
- Is full transparency supported -yes or not?
- Which kind of images is it suitable for? Ranging from buttons to complex photographs.

Here you have a simple table, comparing those criteria in relation with the four criteria. Use it to select the suitable file format.

Format extension	Colour	Compression	Transparency	Common uses
GIF	8-bit	Lossless	Supported	Web graphics and buttons, icons, logos etc. Not for photos.
JPG/JPEG	24-bit	Lossy	Not supported	Photos, web pics.
PNG	Up to 24-bit	Lossless	Supported	Web replacement for GIF. Not for complex photos.
TIF/TIFF	24-bit	Lossless	Supported	Professional photos, etc. Master files of images, no dissemination files.

Table 1: Comparison of image formats according to four different criteria

5. Metadata

Metadata is information about the content, context, and structure of the digital photo file itself and the image it displays.

There are three types of metadata relevant to the images: descriptive metadata, administrative metadata, and technical metadata. In the context of this guidelines, we will use Dublin Core and Exif metadata models.

Image metadata can be placed in three different places:

- Metadata embedded in the image files. In the context of these guidelines, we recommend to use XMP standard.
- Metadata describing images when embedded in Microsoft Office Word and PowerPoint documents, Moodle sites, and other instructional and communications materials.

- Metadata stored out of the image files –within records of bibliographic databases, within web contents where images are embedded, etc.

In the context of this guidelines, first and second situations are taken into account. The reason for this is that it is the creator or provider of the images, or the documents where the images are inserted in, who must ensure the availability from the point in time when they are published on an educational platform.

5.1. Embedded metadata in image files

Ideally, you should fulfil the metadata elements shown in Table 2 for each image.

Metadata element	Comments
Creator	Author of the asset.
Description	A textual description of the content shown in the image.
Title	The title of the document, or the name given to the resource.
Headline	A brief synopsis of the caption. Headline is not the same as Title.
Keywords	Words or phrases to classify an image.
Location	Location information about the content being shown in the image.
Copyright	Copyright notice and reference to related information.
Rating	A value or rating between 0 and 5.
Date and time of Original Digital Image	Date and time when the original data were generated.
Date and time of Image File	Date and time when the digital data were generated.

Table 2. Recommended embedded metadata elements in still images

You can use Exif Pilot to examine the metadata inside conversion files to make sure that the programs and settings you're using don't strip metadata. Exif Pilot is a freeware metadata editor to view, edit and create any element from the most popular schemas, especially XMP. You can download it from [Editing, Creating, and Viewing EXIF, IPTC, and XMP Data with Free Exif Pilot Editor \(www.colorpilot.com/exif.html\)](http://www.colorpilot.com/exif.html).

5.2. Metadata on images embedded in instructional and communications materials. Alt text metadata

Alternative text (alt text) describes an image so that the user's assistive technology may convey what information is being provided by the item. When creating alt text, it's important to remember that it should describe the image. It should NOT include information about copyright or any extra information that would be relevant to a seeing audience. That information should be in a caption below the image.

5.2.1. Recommendations when writing effective alt texts

- Communicate the purpose of the image accurately and succinctly. A good trick is imagining you are explaining the image by telephone.
- Don't repeat the text of an adjacent caption. Screen readers read the caption and the alt text, so avoid having the same details in both.
- Don't contain the words "Image of" at the start of the alt text. Screen readers tell the user that there is an image and then read the alt text.
- Indicate "Screen shot of..." if it is an image taken from a computer screen.
- Indicate "Photo of..." if it is a photo.
- Include words that advance the user's understanding.

- Do not include text if an image is purely decorative, or is the document background. In these cases place an *empty ALT Text* following the instructions for a specific software, you find below.
- Use punctuation for full sentences.

5.2.2. Alt text for images embedded in Word or PowerPoint documents

Modern versions of Microsoft Office allow you add image alt text to inserted images. If these files are converted to HTML or tagged PDF, the alt text is generally preserved.

Alt text includes both a Title and Description field. Due to various interface issues, it is generally recommended that the main alt text should be put into the Description field. The Title field can be optionally used, but offers few benefits at this time.

To embedd the alt Text metadata into an image in any Microsoft Office 2010 software, follow these steps.

1. Open any Microsoft Office 2010 software and select an image so that the square anchors are visible.
2. Right-click the mouse and select Format Picture.
3. In the Format Picture window, select the alt text tab on the right, then insert the alt text into the Description field. If you need to give an empty alt text, simply provide two quotation marks (“ ”) as the alt text.
4. Click the Close icon to finalize the alt text.

5.2.3. Alt text for images embedded in a a page, label, etc. in Moodle

In Moodle, alt text metadata just includes a description of the image.

To embedd the alt Text metadata into an image in Moodle, follow these steps.

1. On the HTML box of a page, label, etc., click the image button on the navigation bar
2. An “Image properties” dialog box will pop up containing a field labeled, “Describe this image for someone who cannot see it.”
3. Place the alt text in this field. If you need to give an empty alt text, simply check the box below it, labeled “Description not necessary”.
4. Enter the remaining metadata (including the image) and click the button “Save image”.

Guidelines number 3: Learning resources consisting in videos

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1. What is an accessible video?

A video is fully accessible when anyone can access the content of the video, even if they have hearing, visual, motor, etc. disabilities, or difficulties in understanding the content, either because they do not know the original language or because of learning disorders.

Accessibility matters throughout the entire life cycle of the video.

- At the planning and production stage, the following should be taken into account:
 - The clarity of the visual content, which should offer sufficient brightness and contrast, no excessive transitions and a suitable rhythm.
 - The clarity of the textual content or script, which should follow the principles of plain language, is coherent and presented at an appropriate pace.
- At the planning and production stage, the videos should include adaptation resources to different kinds of students.
 - Transcription for the deaf and hearing impaired (SpS).
 - Subtitling for the deaf and the hearing impaired (SpS).
 - Audio description for blind and visually impaired (AD) persons.
 - Ideally, interpretation in different sign languages of the receiving public (ILS).
- At the publishing or broadcast stage:
 - The video should be offered through an accessible media player.
 - Ideally, video downloading should be allowed for use on the student's choice device.

In the context of these guidelines, we consider the accessibility objective to be met if captions/subtitles and audio descriptions are provided, and the video can be visualized through an accessible media player.

Captions/subtitles mean the transcription or translation of audio content visually presented together with the content. Audio description means the audio-visual content description in an audio modality.

2. Recommendations concerning the video file format

- Whenever possible, provide the video in MP4 format (or MPEG-4 Part 14) whose file extension is .mp4.

3. Subtitles and captions

3.1. Workflow of adding subtitles and captions

In the context of this guide, the use of the YouTube Video Manager tool is recommended to create and edit subtitle and close captions (CC from now on) files, and incorporate them into a video. As a result, the workflow is made up of two processes: Uploading videos from a computer on YouTube, and Managing subtitles and closed captions

- Uploading videos from a computer onto YouTube
 1. Sign into your YouTube account.

2. Click on Upload at the top of the page.
 3. Before you start uploading the video you can chose the video privacy settings.
 4. Select the video you'd like to upload from your computer. You can also create a video slideshow or import a video from Google Photos. As the video is uploading, two kind of additional actions should be performed:
 - 4.1. The population of video metadata. More details are provided in Section 6.2.
 - 4.2. A decision about notifying subscribers (if you uncheck this option no communication will be shared with your subscribers). Partners will also be able to adjust their Monetization settings.
 5. Click Publish to finish uploading a public video to YouTube. If you set the video privacy setting to Private or Unlisted, just click "Done" to finish the upload or click "Share" to privately share your video.
 6. If you haven't clicked Publish, your video won't be viewable by other people. You can always publish your video at a later time in your Video Manager.
- Managing subtitles and closed captions
 1. Go to your Video Manager by clicking your account in the top right > Creator Studio > Video Manager > Videos.
 2. Next to the video you want to add subtitles or CC to, click the drop-down menu next to the Edit button.
 3. Select Subtitles/CC.
 4. Click the Add new subtitles or CC button.

At this point, you should choose how you want to add or edit subtitles or CC to your video. In the context of these guidelines, two methods are considered: Method A to create new subtitles or CC, or Method B to upload a file containing subtitles or CC.

There is a third suitable method –"Transcribing and auto-sync" –, which is only available for original video language. A fourth method offered by YouTube –"Automatic captioning" –, is definitely not recommended.

- Method A: Creating new subtitles or CC
 1. Choose the language for the subtitles or CC you want to create. Use the search bar to find languages that don't automatically show in the list. If you've already started working on a language, you can select it from "My drafts".
 2. In the draft for the language you want to work on, play the video. If your fans have added updates since your last version, you'll see a "Your fans submitted an update" notice at the top of that language draft's screen.
 3. When you get to the part where you want to add something, type your content into the box. Don't forget to add text describing other sounds happening in the video. For example, you can add sounds like applause or thunder as [applause] or [thunder] so viewers know what's going on in the video.
 4. If you need to, adjust when the caption starts and ends by dragging the borders around the text under the video.
 5. Repeat this process for all the spoken words in the video. If you don't have time to finish the whole video, your changes will be saved in your drafts and you can pick up again later.
 6. When you're done, select Publish.

- Method B: Upload a file of subtitles or CC
 1. Select Add new subtitles or CC. Choose the language for the subtitles or CC you want to create. You can use the search bar to find languages that don't automatically show in the list.
 2. Select Upload a file and choose the type of file you have to upload.
 3. Select Choose file > Upload.
 4. Use the editor to make any needed adjustments to the text and timing of your new subtitle or closed caption.
 5. Select Publish.

3.2. Recommendations when editing the subtitles/captions files

- Faithfulness
 - Subtitles should fit the spoken text, synchronize with the sound and match the lips movement.
 - Subtitles should match the language spoken by the different characters.
- Clarity of expression
 - Take advantage of conjunctions or pauses when cutting a subtitle to match the separation between two different scenes. Do not separate words.
- Proper location
 - Main text should take two or three lines at maximum; each line consisting in 35 to 37 characters.
 - Context information and sound effects should be upper case, and placed in parentheses within the subtitle's line.
- Character differentiation
 - Each character takes just one subtitle's line.
- Abbreviation
 - Use a reasonable number of text abbreviation mechanisms in any Language as long as they do not jeopardize the content comprehension.
- Suitable rhythm
 - The recommended subtitle speed is a maximum of 19 characters per second.

Further recommendations can be found in the international standard ISO / IEC TS 20071-25: 2017(en). In addition, there are national standards including specific recommendations for each language.

4. Audio descriptions

4.1. Workflow of adding audio descriptions on a video

In the context of these guidelines, we do not create real audio descriptions, but instead we recommend the creation of a special caption to be read by screenreaders. Therefore, the use of the Video Manager of YouTube is recommended to create and edit audio-description files, and incorporate them into a video. Consequently, the workflow to add audio descriptions into a video is the same as section “3.1. Workflow of adding subtitles and captions”.

4.2. Recommendations when editing the audio description files

4.2.1. General principles

- Descriptions are allowed when there is no dialog
- The level of description possible will be determined by the soundtrack. Within time constraints, descriptions should include all information which is important to the plot or characterization – locations, settings, characters, clothing, facial expressions and mannerisms, lighting, colours, etc.
- Descriptions should, as far as possible, coincide with the actions being described
- Descriptions should be written in clear, simple language. Technical terms should be avoided unless the context demands it and if possible explained.
- Descriptions should be in present tense.
- New speakers in a scene should be identified.
- Descriptions should not give any more information than the sighted viewer would have.
- The passage of time between scenes should be indicated.
- Visual elements which are imagined or remembered, or are obviously part of a dream, should be differentiated from ‘real’ events.

4.2.2. Writing style

- The description should give a feel for settings but shouldn’t overwhelm people with details.
- Descriptions should be neutral. Interpretive descriptions, value judgments and aesthetic opinions, e.g. “She looks into the distance, thinking of home”, should be avoided.
- The source of unidentified sounds and speech should be described, but only when these would be obvious to the sighted viewer.
- Whole sentences should be used where possible when describing action. It is acceptable though to identify characters by just giving their name, or to describe objects or settings in incomplete sentences (e.g. “A lake with a small island in it.”)
- The description should not draw attention to itself. The describer should blend in seamlessly with the rest of the audio.
- The term “we see”, and cinematic terms like “the camera zooms in...”, “a close-up...” should be avoided.
- Racist or offensive terms should never be used, but ethnicity should be noted when it is essential to plot or character.
- The style of the audio description should match the style of the program. For example, it is acceptable to be more colloquial in children’s programs.

- Every gap in dialogue does not need to be filled with description. The music and ambience can tell the story too.

4.2.3. Specific types of content

- Sounds
 - No description is necessary when there is an obvious audio cue such as a phone ringing.
 - If a description must fall on either side of a sound, it is better for it to be before the sound than after.
- Subtitles
 - For subtitled films, the rendering of subtitles should be noted in the first instance then prefixed with “subtitle” or “he says”, “she says”, etc.
- Songs
 - If it is necessary to describe over a song, important lyrics should be avoided.
- Credits
 - Credits at the beginning and end of a video should be read out.

5. Sharing videos in Moodle

5.1. Method A: Embedding a YouTube video in Moodle

This method is suitable for videos that are not public on YouTube. That is: the videos has been edited on YouTube Video manager to create subtitles and audio description files, but they have been set as private in order to be seen by you, the producer, and the users you choose.

Embedding YouTube videos on a Page resource or in the Description for an Activity such as an Assignment or Forum is recommended. This way provides two main benefits:

- The accessibility resources –subtitles and audio descriptions– are integrated in the video.
- This allows you to add text next to the media, such as guidelines for responses to an Assignment, or context about a video added to a Forum post.

When embedding a YouTube video on a Moodle resource or activity, take into account two important don'ts:

- Do not embed a video directly on your main course page (for example, using a Label or in a Section summary).
- Do not embed more than one video on a page.

5.2. Method B: Uploading a Video File, and all the accessibility resource file to Moodle

This method is suitable for videos that are public on YouTube. That is: the videos have been edited on YouTube Video manager to create subtitles and audio description files, and they have been set as public in order to be seen by and shared with anyone.

5.2.1. Download YouTube subtitles and audio description files

1. Go to your Video Manager by clicking your account in the top right > Creator Studio > Video Manager > Videos.
2. Next to the video you want to download subtitles or CC from, click the drop-down menu next to the Edit button.
3. Select Subtitles/CC.
4. Below PUBLISHED, select the language whose files you want to download from.
5. Display Actions button, and below Download select .vtt file format. The file will be downloaded.
6. Repeat actions 4 to 5 for all the accessibility resources you created with YouTube Video manager.

5.2.2. Creating a section in a Moodle's course

1. Add a new course section and move it to the suitable place.
2. Edit the course section.
3. In the Section name box write the title of the video.

5.2.3. Incorporating accessible video files into a Moodle's section

1. Add a File resource for each of the components of the video through the option Add an activity or resource.
2. On the Name box write a short and clear name of the type of accessibility resource and the language. E.g. *Subtitles (eng)*, for the file including the subtitles in English. Additionally, a Description can be included.
3. On the Select files box, add the file. Apart from the file name, the Author's name and the license should be populated.
4. In the Appearance section, for the Display setting, the option "Force download" is recommended, so as the students are prompted to download the file.
5. Set the remaining settings
6. Scroll to the bottom of the page and click Save and return to the course or Save and display.
7. Check that the media plays correctly. Test captions and descriptions also.

5.2.4. Embedding the code for video tag with captions, subtitles and audio descriptions files

1. In your Moodle course, click "Turn editing on", and add or edit the activity or resource where you will embed media.
2. Edit the course section.
 - 2.1. In the Section name box write the title of the video.
 - 2.2. In the Summary toolbar, click the HTML button.
 - 2.3. On the Section box, paste an HTML code like this

```
<video controls="">
  <source src="video.mp4" srclang="en" type="video/mp4">
  <track src="captions_en.vtt" kind="captions" srclang="en" label="English">
  <track src="subtitles_es.vtt" kind="subtitles" srclang="es" label="Spanish">
  <track src="descriptions_en.vtt" kind="descriptions" srclang="en"
  label="English">
  <track src="descriptions_es.vtt" kind="descriptions" srclang="es"
```

```
label="Spanish">
</video>
```

Code 1. HTML code describing accessible resources of a video

2.4. Customize the HTML code according to the following guidelines.

One element *source* to describe the video file, where:

The value of the *src* attribute is the full file name of the video. In this example, the file name is "video.mp4"

The value of the *srclang* attribute is the ISO 639-1 code of the main language of the video. In this example, the code "en" corresponds to the English language. You can find the full list of codes in [List of ISO 639-1 codes \(en.wikipedia.org/wiki/List_of_ISO_639-1_codes\)](http://en.wikipedia.org/wiki/List_of_ISO_639-1_codes).

The value of the *type* attribute is the mime type code for the file format. In this example, the mime type code is "video/mp4". You can find the full list of codes in [Media Types \(www.iana.org/assignments/media-types/media-types.xhtml\)](http://www.iana.org/assignments/media-types/media-types.xhtml).

One element *track* for each one of the accessibility resources of the video, where:

The value of the *src* attribute is the full file name of the accessibility resource. In this example, the names are "captions_en.vtt" for the first track element, "subtitles_es.vtt" for the second one, "descriptions_en.vtt" for the third one, and "descriptions_es.vtt" for the fourth one.

The value of the *kind* attribute is the type of accessibility resource. It can be "captions", "subtitles", or "descriptions", as shown in the *track* elements in the example.

The value of the *srclang* attribute is the ISO 639-1 code of the main language of the resource. In this example, the code "en" corresponds to the English Language, and "es" to the Spanish. You can find the full list of codes in [List of ISO 639-1 codes \(en.wikipedia.org/wiki/List_of_ISO_639-1_codes\)](http://en.wikipedia.org/wiki/List_of_ISO_639-1_codes).

The value of the *label* attribute is the string corresponding to the language code. In this example, the language namea are "English" and "Spanish".

3. Scroll to the bottom of the page and click "Save" changes.
4. Check that the media plays correctly.

6. Metadata

Metadata is information about the content, context, and structure of the video file itself and the images it displays.

Metadata are vital for your videos to be discovered, to increase audience reach and video visibility.

There are three types of metadata relevant to the videos: descriptive metadata, administrative metadata, and technical metadata. In the context of these guidelines, we will use Dublin Core and Exif metadata models.

Video metadata can be placed:

- Embedded in the video files. In the context of these guidelines, we recommended to use XMP standard.
- Metadata out of the video files. In the context of these guidelines, this modality is limited to YouTube.

6.1. Embedded metadata in video files

Ideally, you should fulfil the metadata elements shown in Table 1 for each video.

Metadata element	Comments
Date Created	Date and optionally time when the video was created.
Date Released	Date and optionally time of the public release of the video.
Rating	How the video is rated by a public source or an authority.
Video Identifier	Globally unambiguous identifier of the video regardless of renditions, formats, encodings etc. This identifier should be shared across all renditions.
Keyword	What the video is about expressed by a free choice of descriptive phrases or keywords.
Description	Textual description of the content of the video.
Genre	Artistic, style, journalistic, product or other genre(s) of the video.
Keyword	What the video is about expressed by a free choice of descriptive phrases or keywords.
Language Version	Language version of the video.
Location Shot	Place from where the video was shot, in particular where the camera was located.
Title	Title of the video, should be a shorthand reference.
Copyright Notice	Any textual notice necessary by legal needs or common use to indicate the current owner of the copyright of this media resource
Creator	Party or parties (person or organisation) which created the video, refinement by the role attribute.
Supplier	Supplier of this copy of the media resource.
File Duration	Duration of the overall video (from the first to the last frame)
Frame Size	Size of the video frame in pixels.
File Format	Format of the file containing the video data.

Table 1. Recommended embedded metadata elements in videos

6.2. Metadata for videos published in YouTube

Two group of metadata should be populated.

- When a video is uploaded in YouTube (see section “3.1. Workflow of adding subtitles and captions”), through the setting option “Basic info”, the metadata elements title, description and tags have to be populated. It is recommended to do it in “private” mode.
- After the video has been uploaded, a second group of metadata have to be populated through the setting option “Advanced Settings”: Category, Video location, Video Language, and Recording date.

Once the metadata have been completely populated, carry out the creation and publication of subtitles and audio-description files that are outlined in sections "3. Subtitles and captions" and "4. Audio descriptions".

Guidelines number 4: Converting learning resources into EPUB3

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3. Displaying and reading the resulting EPUB3 publication in web browsers.....	36

1. What is EPUB3 for?

EPUB3 is considered the "gold standard" in the publishing industry for the production of accessible digital learning resources. In addition, it provides an easy format to integrate different kind of learning objects: text, image, videos... All of them, including the adaptive resources that has been presented in guidelines 1, 2 and 3.

In the context of this guidelines, two easy process are provided: one for converting MS Word or PowerPoint files into EPUB3; and one for displaying and reading the resulting EPUB3 publication in web browsers,

2. Converting a MS Word or PowerPoint file into EPUB3

For this process, the resource [RoboBraille \(robo-braille.org\)](http://robo-braille.org) is recommended. RoboBraille is an e-mail and web-based service capable of automatically transforming documents into a variety of alternate formats for the visually and reading impaired. Requirements for individual, non-commercial user and for institutional use are provided in [Introduction to RoboBraille \(robo-braille.org/introduction-robo-braille\)](http://robo-braille.org/introduction-robo-braille).

1. Enter [RoboBraille \(robo-braille.org\)](http://robo-braille.org).
2. On "Source", select "File".
3. On "Step 1 - Upload your document", click "Select the files" button, and select the file to be converted from the directory. Maximum size of the file is 64 MB. Then, click "Upload" button.
4. On "Step 2 - Select output format", select format "E-book".
5. On "Step 3 - Specify e-book options", select option "EPUB3 with media overlay" or "EPUB3". Select your preferred base font size.
6. On "Step 4 - Enter email address and submit request", enter the email address you want to get the converted file. Click the "Submit" button.
7. Once a "Receipt" page is displayed, you can get the EPUB 3 file on the provided email.

3. Displaying and reading the resulting EPUB3 publication in web browsers

The basic configuration of Moodle does not allow displaying and reading EPUB 3 publications. For this process, the resource Radium for Google Chrome is recommended. Radium is a free Chrome browser extension for reading EPUB books. As it is keyboard accessible and works reasonably well with screen reading software, it can be offered for all kind of students, especially for students with disabilities.

Installing the Radium extension in Chrome is very easy. Just visit [Radium \(chrome.google.com/webstore/detail/reading-for-chrome/febnnnkkadjhahcafoaglmekefifl\)](http://chrome.google.com/webstore/detail/reading-for-chrome/febnnnkkadjhahcafoaglmekefifl) on Chrome Web Store, from the Chrome web browser.

Find more information on Radium on [Radium for Chrome: Getting Started Guide \(www.daisy.org/daisypedia/reading-chrome-getting-started-guide\)](http://www.daisy.org/daisypedia/reading-chrome-getting-started-guide).

AGENDA

Your School PTA Meeting

Date | time | Name

Board members

Name, Title 1 | Name, Title 2 | Name, Title 3 | Name, Title 4 | Name, Title 5 | Name, Title 6 | Name, Title 7 |
Name, Title 8 | Name, Title 9 | Name, Title 10 | Name, Title 11 | Name, Title 12 | Name, Title 13

Time	Item	Owner
Time	Welcome	Owner 1
Time	Old business and approval of last meeting's minutes	Owner 2
Time	Vote on new Secretary	Owner 3
Time	Discuss parent openings on advisory committees - any response from newsletter?	Owner 4
Time	Vote on proposed Budget	Owner 5
Time	Principal's Report	Owner 6
Time	Break	Owner 7
Time	New Business	Owner 8
	A. Recap of Back to School Night – Erik Andersen	
	B. Parent Education Programs – Rachel Valdez, school counselor	
	C. Teacher grants application process – Laura Giussani, Oakdale Schools Foundation	
Time	Committee Reports	Owner 9
	A. Membership, Angela	
	B. Volunteers, Erik	
	C. Newsletter, Dean	
	D. Computer Support, Terry	
Time	Announcements	Owner 10
Time	Adjournment	Owner 11

Lesson Plan Title

SUBJECT

[Course Subject]

TEACHER

[Teacher Name]

GRADE

[00]

DATE

[Date]

OVERVIEW

[To replace any placeholder text (such as this) just select it and then start typing. Don't include space to the right or left of the characters in your selection.]

To add an additional row in the teacher and student guide table that follows, just click in an adjacent row and then, on the Table Tools Layout tab, click Insert Above or Insert Below.]

TEACHER GUIDE**STUDENT GUIDE**

OBJECTIVES		
INFORMATION		
VERIFICATION		
ACTIVITY		
SUMMARY		

REQUIREMENTS

- [Requirement 1]
- [Requirement 2]
- [Requirement 3]

RESOURCES

- [Resource 1]
- [Resource 2]
- [Resource 3]

NOTES

[Add your notes here.]

EINFOSE

<http://einfose.ffos.hr/>

Lesson Plan Title

SUBJECT

[Course Subject]

TEACHER

[Teacher Name]

GRADE

[00]

DATE

[Select Date]

OVERVIEW

[We love the look of this professional lesson plan just as it is. But we also think you should have choices. To easily customize this template and make it your own, on the Design tab, check out a wide range of options in the Themes, Colors, and Fonts galleries. Or, to use your school colors, click Colors and then click Customize Colors. To replace any placeholder text, such as this, just click it and type.]

TEACHER GUIDE**STUDENT GUIDE**

OBJECTIVES		
INFORMATION		
VERIFICATION		
ACTIVITY		
SUMMARY		

REQUIREMENTS

• [Requirement 1]

RESOURCES

• [Resource 1]

NOTES

[Add your notes here.]

- [Requirement 2]
- [Requirement 3]

- [Resource 2]
- [Resource 3]

[Course Name] Syllabus

[Semester and Year]

Instructor Information

Instructor

Email

[Email address]

Office Location & Hours

[Location, Hours, Days]

General Information

Description

To replace any placeholder text (such as [Course Name] above), just click it and type.

Expectations and Goals

You might love the look of this clean, professional syllabus as much as we do. But it's also easy to get exactly the look you want. On the Design tab of the ribbon, check out the Themes, Colors, and Fonts galleries to preview options right in your document and then click to apply one you like.

Course Materials

Required Materials

Need a heading or a bullet? On the Home tab, in the Styles gallery, choose from all styles used in this syllabus.

- Click here to add text.
- Click here to add text.

Optional Materials

Want to add more tables to your document that look like the Course Schedule and Exam Schedule tables that follow? Nothing could be easier. On the Insert tab, just click Table to add a new table. New tables you create in this template are automatically formatted to match.

Required Text

[Media Type], [Author Name]

[Media Type], [Author Name]

Course Schedule

Week

Topic

Reading

Exercises

Exam Schedule

Date

Subject

Additional Information and Resources

[Click Here to Add a Subheading](#)

Click here to add text.

EINFOSE

<http://einfose.ffos.hr/>

Course Title

TEACHER NAME | COURSE NUMBER

Course Description

- ▶ Type brief course summary
- ▶ Location
- ▶ Lectures: Mon-Wed-Fri at 00:00 am
- ▶ Labs: Tues-Thurs at 00:00 am
- ▶ Prerequisites:
- ▶ Credits:

Course Objectives

Course Objectives	Results/Outcome Expected	Skills Developed
Objective 1	Result 1	Skills Developed
Objective 2	Result 2	Skills Developed
Objective 3	Result 3	Skills Developed
Objective 4	Result 4	Skills Developed

Required Materials

Reading

- Books
- Articles
- Web
- Other

Project

- Supplies
- Equipment
- Other project materials

Technology/Tools

- Software and hardware

Instructional Methods

- ▶ Briefly describe instructional methods
 - ▶ Lectures
 - ▶ Demonstrations
 - ▶ Class discussion/Virtual discussions
 - ▶ Individual/group projects
 - ▶ Labs

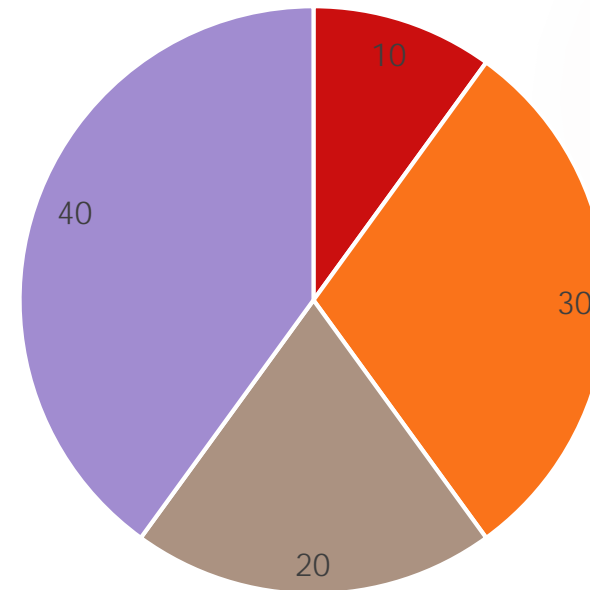
Schedule

Week	Topic	Assignment/Project	Objective
Week 1	Topic 1	Brief description	Objective
Week 2	Topic 2	Brief description	Objective
Week 3	Topic 3	Brief description	Objective
Week 4	Topic 4	Brief description	Objective
Week 5	Topic 5	Brief description	Objective

Assessment Criteria

- ▶ Weekly assignments
- ▶ Projects
- ▶ Quizzes
- ▶ Final Exam

Percent of Grade



■ Weekly assignments ■ Projects
■ Quizzes ■ Final exam

Resources

Web & Software Tools

Class web site

Collaboration tools

Mobile/Other apps

Social Media

Twitter

Facebook

Other

Labs, Study Groups

Labs

Study groups

Instructor Contact Information

Email

Office
phone

Office
hours

Instructor
web page

Questions?

Information resource for the professors to understand the underlying motivation of the guidelines

[This document is pending linguistic, accessibility and metadata revision]

*By Adaptabit Research Group. Universitat de Barcelona
Draft version: August 2017*

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1. Organizations

- Adaptabit: Grup de treball dedicat a l'accessibilitat digital en docència, recerca i innovació docent.
 - <http://bd.ub.edu/adaptabit/ca>
- CESyA: Centro Español del Subtitulado y la Audiodescripción.
 - <http://cesya.es/>
- European Blind Union (EBU).
 - <http://www.euroblind.org/>
- Global Public Inclusive Infrastructure (GPII).
 - <http://gpii.net/>
- GRIHO: Grup de Recerca en Interacció Persona Ordinador i Integració de Dades.
 - <http://griho.udl.cat/>
- IMS Global Learning Consortium.
 - <http://www.imsglobal.org/>
- International Digital Publishing Forum <idpf>.
 - <http://idpf.org/>
- The WGBH / NCAM / National Center for Accessible Media.
 - <http://ncam.wgbh.org/>
- Web Accessibility In Mind (WebAIM).
 - <http://webaim.org/>
- Web Accessibility Initiative (WAI) - W3C.
 - <http://www.w3.org/WAI/>
- Western Interstate Commission for Higher Education (WICHE) - WCET (WICHE Cooperative for Educational Technologies).
 - <http://wcet.wiche.edu/>
- World Wide Web Consortium (W3C).
 - <https://www.w3.org/>

2. Standards and Formats

- Learning Resource Metadata Initiative: LRMI Metadata Terms in RDF.
 - <http://dublincore.org/dcx/lrmi-terms/>
- W3C on GitHub: WebVTT: The Web Video Text Tracks Format.
 - <https://w3c.github.io/webvtt/>
- W3C: HTML5.
 - <https://www.w3.org/TR/html5/>
- W3C: WebVTT: The Web Video Text Tracks Format.
 - <https://www.w3.org/TR/webvtt1/>
- Web Content Accessibility Guidelines (WCAG) 2.0.
 - <http://www.w3.org/TR/WCAG20/>

3. Guidelines and Checklists

- Asociación Europea ILSMH: Directrices Europeas para Facilitar la Lectura.
 - <http://www.sidar.org/recur/desdi/pau/directriceseuropeas%20para%20facilitar%20la%20lectura.pdf>

- IMS Guidelines for Developing Accessible Learning Applications.
 - <http://www.imsglobal.org/accessibility/accessiblevers/sec5.html>
- WebAIM: Section 508 Checklist.
 - <http://webaim.org/standards/508/checklist>
- WebAIM: WCAG 2.0 Checklist.
 - <http://webaim.org/standards/wcag/checklist>

4. Softwares and Tools

- Able Player Demos.
 - <http://ableplayer.github.io/ableplayer/demos/>
- Able Player: Fully accessible cross-browser HTML5 media player.
 - <https://ableplayer.github.io/ableplayer/>
- Access for all: Free PDF Accessibility Checker (PAC 2).
 - <http://www.access-for-all.ch/en/pdf-lab/pdf-accessibility-checker-pac.html>
- Accessibility Developer Tools.
 - <https://chrome.google.com/webstore/detail/accessibility-developer-t/fpkknkljclfencbdbgkenhalefipecmb>
- aXe - Analyze Accessibility.
 - <https://chrome.google.com/webstore/detail/axe/lhdoppojpmngadmndnejejpokejbdd>
- Camtasia - TechSmith.
 - <https://www.techsmith.com/video-editor.html>
- Free OCR.
 - <http://www.free-ocr.com/>
- Live WebVTT Validator.
 - <https://quuz.org/webvtt/>
- NCAM: CADET: Caption And Description Editing Tool.
 - <http://ncamftp.wgbh.org/cadet/>
- OpenDyslexic.
 - <https://gumroad.com/l/OpenDyslexic>
- Paul J. Adam: JavaScript Bookmarklets for Accessibility Testing.
 - <http://pauljadam.com/bookmarklets/index.html>
- Robobrace Organization - EPUB3 Converter.
 - <http://robobrace.org/>
- TechSmith Camtasia: Voluntary Product Accessibility Template (VPAT).
 - <https://assets.techsmith.com/Docs/pdf-camtasiaStudio/TechSmith-Camtasia-VPAT.pdf>
- The Paciello Group: Colour Contrast Analyser.
 - <https://www.paciellogroup.com/resources/contrastanalyser/>
- WAI: WCAG-EM Report Tool. Website Accessibility Evaluation Report Generator.
 - <https://www.w3.org/WAI/eval/report-tool/>
- WebAIM: Color Contrast Checker.
 - <http://webaim.org/resources/contrastchecker/>

5. Manuals and Helps

- Amara: Video description as text.

- <https://support.amara.org/support/discussions/topics/8510>
- EduTechWiki: WebVTT.
 - <http://edutechwiki.unige.ch/en/WebVTT>
- Mozilla Developer Network: Web Video Text Tracks Format (WebVTT).
 - https://developer.mozilla.org/en-US/docs/Web/API/WebVTT_API
- Office Accessibility Center - Resources for people with disabilities.
 - <https://support.office.com/en-us/article/Office-Accessibility-Center-Resources-for-people-with-disabilities-ecab0fcf-d143-4fe8-a2ff-6cd596bddc6d>
- OGGTVdotcom: WebVTT HTML5 Closed Caption Example.
 - <https://www.youtube.com/watch?v=PQfXRglalFQ>
- TechSmith: Accessibility.
 - <https://www.techsmith.com/accessibility.html>
- TechSmith: Camtasia 9 | 3 Tutorials.
 - <https://www.techsmith.com/tutorial-camtasia-9-3.html>
- WAI: Using the track element to provide audio descriptions.
 - https://www.w3.org/WAI/GL/wiki/Using_the_track_element_to_provide_audio_descriptions
- WebAIM: Microsoft Word. Creating Accessible Documents.
 - <http://webaim.org/techniques/word/>
- WebAIM: PDF Accessibility. Defining Acrobat PDF Accessibility.
 - <http://webaim.org/techniques/acrobat/>
- WebAIM: PowerPoint Accessibility.
 - <http://webaim.org/techniques/powerpoint/>

6. Documentaries

- Annie Elaine: What is Accessibility? [CC].
 - <https://www.youtube.com/watch?v=zsMo7SOuB1c>
- CNN Chile: Conciencia Inclusiva: Discapacidad y educación superior.
 - <https://www.youtube.com/watch?v=ARwFndnivdc>
- CNN Chile: Conciencia Inclusiva: Población con discapacidad auditiva.
 - <https://www.youtube.com/watch?v=VWfpAOXIXuw>
- David Berman: Web Accessibility Matters: Now is the Perfect Time.
 - <https://www.youtube.com/watch?v=blp83MOfilE>
- David Berman: Web Accessibility Matters: Why Should We Care (with Audio Description).
 - <https://www.youtube.com/watch?v=fuGl4bnBlw0>
- Defensor del Pueblo Andaluz: Universidades y discapacidad.
 - <https://www.youtube.com/watch?v=BmljHZvOIRc>
- Multimedia universal: Concierto del coro Manos Blancas en el salón Mozarteum de Salzburgo.
 - <https://www.youtube.com/watch?v=M0hpiCKI7pQ>
- VDRDC: Video Description Guidelines: "How to Know What to Say" by Rick Boggs.
 - <https://www.youtube.com/watch?v=JZINVajYx9s>

7. Projects

- Accessibility at Penn State.

- <http://accessibility.psu.edu/>
- Adaptabit: El video sense barreres a la universitat.
 - <http://bd.ub.edu/adaptabit/ca/video-sense-barreres-a-la-universitat>
- Adaptabit: PMID vídeos accessibles.
 - <http://bd.ub.edu/adaptabit/ca/projectes/pmid-videos-accessibles>
- Audio Description Project: American Council of the Blind.
 - <http://www.acb.org/adp/index.html>
- Audio Description Project: Samples.
 - <http://www.acb.org/adp/samples.html>
- El vídeo sense barreres a la universitat: Discapacitat i accessibilitat web.
 - <http://www.videoaccessible.udl.cat/accessibilitat.html>
- El vídeo sense barreres a la universitat: Projecte de vídeos accessibles.
 - <http://www.videoaccessible.udl.cat/>
- Fundación Ciudadanía: Extremadura vive la Fácil Lectura.
 - <http://www.facillectura.es/>
- Paul J. Adam - Web & Mobile Accessibility Consultant in Austin, TX.
 - <http://pauljadam.com/>
- Proyecto Chamberlin.
 - <http://proyecto-chamberlin.org/>

8. Articles and Institutional Informations

- <idpf>: Digital Learning Metadata Alliance Launched by Dublin Core, IMS Global and IDPF.
 - <http://idpf.org/news/digital-learning-metadata-alliance-launched-by-dublin-core-ims-global-and>
- Access for all: Accessibility.
 - <http://www.access-for-all.ch/en/accessibility.html>
- Accessibility at Penn State: Audio Description for the Blind (Video).
 - <http://accessibility.psu.edu/video/audiodescription/>
- Blog de Jack Moreno: 10 lectores de ePub gratuitos para Windows.
 - <https://jackmoreno.com/2013/07/26/10-lectores-de-epub-gratuitos-para-windows/>
- Centro virtual Cervantes: La accesibilidad a los medios de comunicación audiovisual a través del subtítulo y de la audiodescripción.
 - http://cvc.cervantes.es/lengua/esletra/pdf/04/020_diaz.pdf
- CESyA: Tutorial. Accesibilidad a los contenidos audiovisuales. Subtitulado.
 - <http://cesya.es/intranet/sites/default/files/PresentacionParte2SubtituladoLourdesMoreno.pdf>
- Dipòsit Digital de la Universitat de Barcelona: Asignación de metadatos de accesibilidad a vídeos docentes.
 - http://diposit.ub.edu/dspace/bitstream/2445/60425/1/CDUI_2014-Centelles-et-al.pdf
- Dipòsit Digital de la Universitat de Barcelona: Guía de contenido digital accesible - Microsoft PowerPoint 2010.
 - http://diposit.ub.edu/dspace/bitstream/2445/35875/1/Guia_PowerPoint2010_es.pdf
- EBU: Cómo hacer que la información sea accesible para todos.
 - <http://www.euroblind.org/resources/guidelines/brochure-translations/nr/426>
- Gobbledygook: A blog about how the internet is changing scholarly communication.

- <http://blog.martinfenner.org/>
- Gobbledygook: Metadata in Microsoft Word documents.
 - <http://blog.martinfenner.org/2015/03/20/metadata-in-microsoft-word-documents/>
- Google Developers: HTML5 video accessibility and the WebVTT file format - Audio Described.
 - <https://www.youtube.com/watch?v=gK72pcu3cpk>
- GRIHO: Guía de Contenido Digital Accesible. Guía de Microsoft Word 2007.
 - [http://griho.udl.cat/export/sites/Griho/files/documents/GuiesContingutAccessible/3_Guia de Microsoft Word 2007 es.pdf](http://griho.udl.cat/export/sites/Griho/files/documents/GuiesContingutAccessible/3_Guia_de_Microsoft_Word_2007_es.pdf)
- GRIHO: Guia de contingut digital accessible.
 - <http://griho.udl.cat/projects/GuiesCongintutDigitalAccessible.html>
- Hipertextual: Extensiones para leer ebooks desde el navegador.
 - <https://hipertextual.com/archivo/2012/11/extensiones-para-leer-ebooks-desde-el-navegador/>
- HTML5 Doctor: Video Subtitling and WebVTT.
 - <http://html5doctor.com/video-subtitling-and-webvtt/>
- HTML5 Rocks: Introducción al elemento de pista.
 - <https://www.html5rocks.com/es/tutorials/track/basics/>
- Ian Devlin: WebVTT and Audio.
 - <https://www.iandevlin.com/blog/2015/12/html5/webvtt-and-audio>
- Ian Devlin: WebVTT Example.
 - <https://www.iandevlin.com/html5test/webvtt/html5-video-webvtt-sample.html>
- IMS: Accessibility.
 - <http://www.imsglobal.org/accessibility/>
- Jaclyn Puntillo. Graduate Student. Boise State University: Web Accessibility for Users with Color Blindness.
 - <http://edtech2.boisestate.edu/jaclynpuntillo/502/accessibility.html>
- Ministerio de Educación, Cultura y Deporte de España: Accesibilidad a los contenidos audiovisuales para personas con discapacidad.
 - <http://www.mecd.gob.es/dms-static/e8708f23-0b08-4fd6-8889-97016dfc2c72/2011-accesibilidaduniversal2011-pdf.pdf>
- Papel y pantalla: Lectores de ePUB 3.0.
 - <http://www.papelypantalla.com/content/6-lectores-de-epub-30>
- RoboBraille: Privacy & Terms.
 - <http://robobraille.org/privacy-terms>
- soft Xpansion: Metadata in Microsoft Office and in PDF Documents. Types, Export, Display and Removal.
 - <http://soft-xpansion.eu/files/cc/Metadata.pdf>
- The Open University: Adding metadata to documents.
 - <http://www.open.ac.uk/about/web-standards/editorial-standards/metadata/adding-metadata-documents>
- The WGBH / NCAM / National Center for Accessible Media: Accessible Assessments.
 - http://ncam.wgbh.org/experience_learn/educational_media/accessible-assessments
- Universidad de Alcalá. Departamento Ciencias Computación: Estándares de E-Learning: Guía de Consulta.
 - <http://www.cc.uah.es/hilera/GuiaEstandares.pdf>
- Universidad Nacional de Educación a Distancia: Guía de accesibilidad de documentos electrónicos.
 - https://descargas.uned.es/publico/pdf/unidis/Capitulo_IV_Accesibilidad_PDF.pdf

- University of Minnesota: Audio Description for Inclusive Video.
 - http://www.d.umn.edu/itss/news/2016/03/audio_description.html
- Uruguay. Universidad de la República. Facultad de Ingeniería. Silvana Temesio, Regina Motz: Metadatos de accesibilidad en Recursos Moodle.
 - <http://www.esvial.org/wp-content/files/ATICA2014pp225-232.pdf>
- Usability Gov: Color Blindness & Web Design.
 - <https://www.usability.gov/get-involved/blog/2010/02/color-blindness.html>
- WCET: A Digital Accessibility Agenda for Education.
 - <https://wcetfrontiers.org/2017/03/15/a-digital-accessibility-agenda-for-education/>
- Wikipedia: WebVTT.
 - <https://en.wikipedia.org/wiki/WebVTT>
- Word Ribbon Tips Net: Using Tags with Document Files.
 - https://wordribbon.tips.net/T005952_Using_Tags_with_Document_Files.html

EINFOSE project (Erasmus plus, Key 2)

Workshop – Multiplier event, Barcelona, 30 November and 1 Desember 2017 (Faculty of Library and Information Science; Melcior de Palau, 140; 08014 Barcelona)

Thursday, 30 November

14:00– 15:00 Arrival and registration

15:00 – 15:30 Opening (greetings) and presentations of Workshop participants, including welcome words by the Faculty's Dean (Boardroom of the Faculty)

15:30 – 16:30 Introductory talk by Tatjana Aparac-Jelusic, project coordinator (Boardroom of the Faculty)

16:30 – 17:00 Coffee break

17:00 – 17:30 Introduction to the EINFOSE package for accessible learning resources: why, how and who for? (Room number 312 of the Faculty)

17:30 – 19:00 Workshop: hands on practice with the guidelines (Room number 312 of the Faculty)

Friday, 1 Desember

9:00 – 11:00 Invited talk (TBA) and discussion.

Jutta Treviranus, Full Professor at the Ontario College of Art and Design University (OCADU) in Toronto, Canada. Director and Founder of the Inclusive Design Research Centre (IDRC) and the Inclusive Design Institute (IDI). Boardroom of the Faculty

11:00 – 11:30 Coffee break

11:30 – 12:30 Gathering feedback about the guidelines on accessible teaching resources (Boardroom of the Faculty)

12:30 – 13:30 Evaluation of students' satisfaction with the Summer School (Boardroom of the Faculty)

13:30 Closing

Summary of the feedback received about the accessibility guidelines

Participants evaluated positively that the guidelines were short, straight to the point and accurate and based on mainstream tools.

Altogether, participants were concerned that guidelines mainly cover only proprietary tools, specifically Microsoft Office Word and Microsoft Office Powerpoint, and suggested to include some open software tools such as Libre or Open Office

They were also concerned about Robobrilie online tool, which supposes sending original documents through internet without any guarantee of confidentiality or rights protection (comment: there are clear terms for the tool: <https://www.robobrilie.org/privacy-terms>, but they are not explicit in the guidelines)

They also noted that some professors may need the guidelines to be written in their own language for easy understanding and incorporation in their regular practices.

Many suggestions revolved around increasing the visibility and dissemination of the guidelines. Through several mechanisms:

- Incentivising the use of them within EINFOSE with badges or some kind of benefits for professors
- Integrating the guidelines in broader guidelines
- Complement them with economics benefits for the universities and marketing aspects (IDRC could be a source of inspiration)
- Collaborating with other guidelines
- Training professors and kids about an accessible use of the tools at all levels

Some participants offered a possible collaboration with their own institutions (UV, UNED, IDRC)

Other ideas were to include A11y plugins into the LMS or incorporate ICT4All tools

As future developments participants asked about the possibilities to create a graphic interface that supports the inclusion of accessibility criteria in authoring documents, and on “reconverting” old documents.