

stukowin  
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## 1 Module Documentation

### 1.1 Content

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## 1.2 Introduction

**Please note that was document is automatically generated without much control over the layout. It is only meant to be used in print or to have one single file. For everything else, please refer to the HTML documentation, which is easier to navigate, better structured and prettier!**

### 1.2.1 Module

This documentation describes the custom module "stukowin" for [Drupal](#). Drupal is a free and widely-used content management system (CMS), which provides the possibility to extend it by implementing proprietary modules that hook into the Drupal core system. The basic idea of this module is to connect the Drupal system with the curricula development and support system (CEUS) provided by the [Johannes Kepler University in Linz](#), available at <https://lss.jku.at/wiki/index.php/Main/CEUS> and <https://lss.jku.at/studienhandbuch/>. The main goal of this method was to reduce the maintenance effort needed for keeping the curricula data on a website up to date.

The module is composed of four components, as seen [below](#), each of which provides different functionalities to reduce the administrative effort and all of which are somehow interconnected.

### 1.2.2 Project

This module was created as a result of the course "IT Project", a part of the bachelor's degree in business informatics at JKU, during the summer semester 2014.

The project name is "Relaunch der Homepage der Studienkommission WIN". The original site can be found at <http://stukowin.jku.at/>. The project sponsor is Dr. Stefan Berger ([stefan.berger@jku.at](mailto:stefan.berger@jku.at)).

The main functional project requirements include the following:

1. Automatic import of curricula data from CEUS
2. Possibility of editing curricula entries after the import
3. Version management for curricula entries
4. Automatically displaying different curricula on the site
5. Possibility to create new ideal courses of studies ("Idealtypischer Studienverlauf", ITSV) and specialisation curricula
6. Archiving and exporting curricula in the form of PDF documents

## Remarks

This documentation is one of four documents that make up the entire project documentation, namely the operator guide, the user guide and the test documentation.

## 1.3 CEUS API

In order to make functional requirements such as displaying curricula and course details possible, it is necessary to extract the required data from CEUS. For this reason, JKU offers a JSON API for CEUS at <https://lss.jku.at/studienhandbuch/api/0.1> (Note that this URL is not available without authentication credentials). This API was developed for this project (hence the version number of 0.1) and is still prone to changes. Due to its novelty, no documentation for the API exists, which is why we try our best to document it together with our own module documentation.

## Note

This is not the official documentation of the CEUS API, it is merely based on our own knowledge about it.

For any questions concerning the API please contact Andreas Roesch ([Andreas.Roesch@jku.at](mailto:Andreas.Roesch@jku.at)) or Mag. Martin Stabauer ([martin.stabauer@jku.at](mailto:martin.stabauer@jku.at))

This API provides four public methods which will be described below.

## 1.3.1 auth.php

Method	/auth.php
Input	"username", "password"
Output	"authtoken"

The method `auth` serves the purpose of authenticating a user and returns a token which is required for every other API method call. The user credentials at the time of development are as follows:

```
User: dke2
Password: studke2hb
```

## 1.3.2 list.php

Method	/list.php
Input	"authtoken"
Output	Array of Branch objects (see below) in JSON

The method `list` returns an array of all curricula to which the user has access. In the scope of this project, these are the bachelor and master studies in business informatics. The curricula are returned in the data structure shown below:

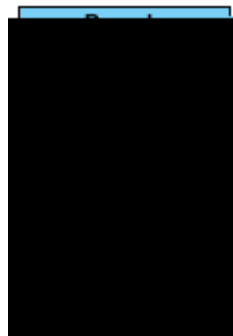


Figure 1: Branch Objects

The data structure contains a few elements. For this project, only the following are relevant:

Field	Description
id	CEUS id of the curriculum. This id is needed for the <a href="#">curr.php</a> method.
name	German name of the curriculum
name_en	English name of the curriculum
faculty	Faculty of the curriculum
type	Bachelor or master studies
typeshort	Short version of the type (B or M)
version	Semester when the curriculum was introduced (e.g. 2013W)

### 1.3.3 curr.php

Method	/curr.php
Input	"authtoken", "id"
Output	Object of type curriculum (see below) in JSON

The method `curr` returns general information about a curriculum and, more importantly, its structure. A curriculum is identified through the id returned by [list.php](#) method. Curricula are returned in the following structure:

Curriculum
-id : String
-name : String
-name_eng : String
-version : String
-wikigroup : String
-currtype : String
-tree : CurrItem[]

Figure 2: Curriculum Objects

All but the last element have already been described in [list.php](#). The last one is described below:

Field	Description
tree	A nested array of CurrItems, which represents the curriculum structure. The field <code>id</code> of each CurrItem is needed for the <a href="#">detail.php</a> method. The field <code>subtree</code> contains the subcourses of each course

CurrItem
-id : String
-subtree : CurrItem[]

Figure 3: CurrItem Objects

### 1.3.4 detail.php

Method	/detail.php
Input	"authtoken", "id" [, "lang"]
Output	Array of Detail objects (see below) in JSON

The method `detail` returns the details for one CurrItem. A CurrItem can be a subject (Fach), a module (Modul) or a simple course (Lehrveranstaltung). For localised data the optional parameter `lang`



with the value "de" (German) or "en" (English) can be given. Details are returned in the following data structure:

Detail
-id : String
-code : String
-pagename : String
-type : String
-ects : String
-verantname : String
-verantemail : String
-changedate : String
-version : String
-currname : String
-currnameeng : String
-currversion : String
-lv_id : String
-wst : String
-teilungsziffer : String
-zuteilung : String
-lvtyp : String
-wechselnd : String
-sprache : String
-langname : String
-lvtypenname : String
-lvtypshort : String
-zuteilungname : String
-currtypenname : String
-curriculumname : String
-fachbereichname : String
-typenname : String
-uniname : String
-levelname : String
-levelshort : String
-title : String
-headtitle : String
-ziele : String
-lehrinhalte : String
-beurteilung : String
-sonstiges : String
-voraussetzungen : String
-methoden : String
-literatur : String
-equivalent : String
-children : DetailItem[]

Figure 4: Detail Objects

For this project, mainly the following elements are relevant:

Field	Description
ects	Credits for the course
verantname	Name of the person responsible for this course
verantemail	Email of the person responsible for this course
changedate	Date and time of the last change of this entry (in the format "YYYY-MM-DD hh:mm:ss")

currname	Name of the curriculum that contains this course
wst	Semester periods per week (Semesterwochenstunden) for this course
langname	Language the course is held in
lvtypshort	Short type of the course (e.g. VL, UE, KV etc.)
lvatype	Long type of the course (Vorlesung, Uebung etc.)
typename	Long type of the entry (subject, module or course)
type	Number representative of the type of entry (1=subject, 2=module and 3=course)
title	Course title
ziele	Course goals
lehrinhalte	Contents of teaching
voraussetzungen	Course requirements
methoden	Teaching methods

### 1.3.5 Errors

In case of an error, the CEUS API returns a JSON object with the error message contained in the `error` field. Known errors are:

- Invalid id given
- Missing parameter
- Missing authentication token

## 1.4 Modules

### 1.4.1 CEUS2Drupal

#### 1.4.1.1 Import

The import of data from CEUS to the Drupal environment is implemented in this component. All its functionality is collected in the [CEUS2Drupal](#) component. The data model for the Drupal-internal representation of courses is defined in the module's [install component](#), the necessary database tables are automatically created during the installation. Because the API URL and user credentials are prone to change, they need to be configurable. This is achieved in the [admin menu](#):

Home

▼ **CEUS API SETTINGS**

**URL to CEUS API** \*

The URL to CEUS API

**Username for CEUS API** \*

Username for CEUS API

**Password for CEUS API** \*

Password for CEUS API

▼ **PDF SETTINGS**

**Path**

The Path where the generated PDFs are saved

**Name**

The name template to use for new PDFs. Insert %version% for the curriculum version (e.g. "2013W") and %currtype% for the curriculum type (e.g. "Bachelorstudium")

Save configuration

Figure 5: Module Configuration Page

#### Note

Administrator rights are needed to configure the login details

The communication between this module and CEUS occurs as shown in the included [SequenceDiagramImport.pdf](#) file.

The import from CEUS is performed roughly in the following steps:

1. The auth token is requested from the CEUS API
2. All available curricula are received from the API
3. For each curriculum, the curriculum tree is requested from the API
4. For each course in the tree, the details are requested in German and English

5. During the first import, new Drupal vocabularies, vocabulary terms and content nodes are created
6. We try our best to parse the field `voraussetzungen` and extract relations between courses (recommended/required)

This process is shown in the included [FlowchartCEUS2Drupal.pdf](#) file, with the corresponding methods in `ceus_importer` that perform each step. Here is a quick textual description of the process:

The data import is initiated in the file `stukowin.module`. This file first access `ceus_importer::connect()` in the file `ceus_importer.inc.php` and prepares the import process. In order for this to work, the necessary settings have to be made in the configuration menu shown above. All methods for the data import are collected in the `ceus_importer.inc.php` file.

After this, the method `ceus_importer::get_curricula()` is called, which starts the import process. It checks if a Drupal vocabulary for the imported curricula already exists. If none are found, a new one is created. If the curricula's version numbers are different, a new vocabulary is created as well.

After getting the tree for each curriculum, the details for its courses are requested and stored.

Another noteworthy part is the method `ceus_importer::process_relations()`. This method is responsible for parsing the field `voraussetzungen`, which can contain any text possible. The method examines the field in three steps:

1. Is the field empty? If not, go to Step 2.
2. Does the field begin with "empfohlen"? If yes, it is a recommended relation, if not it is a required relation.
3. Try to find `<li>` and `<a>` tags and extract a course title or code from them.

Requirements are important mostly because they are used and shown in the [automatically generated graphic representation](#).

All of the code for the import is contained in the `ceus_importer.inc.php` file.

See also

[CEUS2Drupal](#)

#### 1.4.1.2 Change Management

The functional requirements of this project make it necessary to periodically extract data from CEUS on the one hand and giving administrators and moderators the ability to overwrite data on the other hand.

Remarks

How to overwrite course data is described in the user documentation.

This creates the challenge of properly versioning the CMS content, which is why every import follows the rules shown in the included [Changemanagement.pdf](#) file

Every time a content node is created or updated, it gets a red New tag in the content overview (see image below), through which the administrator can easily see which nodes have been updated. In addition to this, the import returns a success message that tells the administrator how many nodes have been created or updated, so that one can easily tell if changes have occurred.

<input type="checkbox"/>	TITEL	TYP	AUTOR	STATUS	AKTUALISIERT ▼	SPRACHE	OPERATION
<input type="checkbox"/>	Model Checking <b>Neu</b>	LVA	admin	Veröffentlicht	07/04/2014 - 22:35	Deutsch	Bearbeiten löschen
<input type="checkbox"/>	Information Engineering <b>Neu</b>	LVA	admin	Veröffentlicht	07/04/2014 - 22:35	Deutsch	Bearbeiten löschen
<input type="checkbox"/>	Einführung in die Softwareentwicklung	LVA	admin	Veröffentlicht	07/04/2014 - 22:35	Deutsch	Bearbeiten löschen
					07/04/2014 -		Bearbeiten

Figure 6: Red New Tag

#### 1.4.2 Drupal2ITSV

As CEUS does not provide any information about fields of specialisation during the master studies and ideal courses of studies, henceforth called ITS<sub>V</sub> due to its German name, it was a project requirement that new curricula can be created by the administrator for such purposes.

A freely available Drupal module called Taxonomy Manager (<https://www.drupal.org/project/taxonomy-manager>) gives the administrator the ability to copy vocabulary terms from one vocabulary to another, which is most of the work. Unfortunately, this process cannot be simplified any further. Nevertheless, we tried to at least automate the task of creating a new vocabulary, copying all of the information over from the source curriculum and creating top-level terms (such as "1. Semester" etc.), tasks which will be performed every time a new ITS<sub>V</sub> or specialisation has to be created.

This component handles exactly that. It inserts a new menu item (at admin/settings/stukowin/taxonomy) where the administrator can select a source curriculum to base the new one on, select whether to create an ITS<sub>V</sub> or specialisation vocabulary, enter a name and choose how many top-level terms should be inserted. Once the administrator has filled out the form, the new vocabulary is automatically created and the browser is redirected to the Taxonomy Manager's "Dual View", where the administrator can begin copying courses into the new vocabulary.

#### Remarks

This component does not have its own file as it does not contain a lot of code. All of its functionality is in the [stukowin.module](#) file.

See also

[Drupal2ITSV](#)

#### 1.4.3 Drupal2PDF

In order to permanently and easily archive past curricula there is the option to automatically create a course overview PDF document from the imported courses. For this component to work properly, the necessary settings have to be made in advance (see module configuration image above). The administrator is provided with a new menu (at admin/settings/stukowin/pdf) where the curriculum to be archived can be selected. Once he clicks on "Create PDF", the PDF generation in [overviewPDF::createPDF\(\)](#) is started. (All of the PDF generation code is contained in the [pdf\\_creator.inc.php](#) file)

The PDF generation process will flow as shown in the included [FlowchartDrupal2PDF.pdf](#) file.

See also

[Drupal2PDF](#)

#### 1.4.4 Drupal2AGG

So far we have described how to import and edit curricula into Drupal. But part of the functional requirements were also being able to automatically display the curricula on the website in the form of an automatically generated graphic (AGG). This component provides the functionality for doing exactly that. Again, it can be separated into three components:

##### 1.4.4.1 Drupal JSON Interface

To make the curricula data available to clients, several JSON interfaces have been implemented that make curricula publicly reachable. This is needed so that the client browser can properly display the curricula.

The following interfaces are available:

Name	Path	Input Parameter	Description
Curriculum List	stukowin/crcmlst	"currtype" : Type of curriculum to get ("Bachelorstudium" or "Masterstudium") "taxtypes" : Types of vocabularies to get ("curriculum", "itsv" and/or "specialisation")	Returns a list of all curricula currently published (weight < 0), like <a href="#">list.php</a>
Curriculum Tree	stukowin/crc1m	Vocabulary id of the curriculum to get	Returns the curriculum tree of one curriculum, containing all courses and their details
Single course	stukowin/lva	Node id of the course to get	Returns the details of a single course

All of these interfaces are defined in the [stukowin.module](#) file.

##### 1.4.4.2 CKEditor Plug-in

As the dynamic display of curricula in the browser requires a strict HTML document structure, we refrained from letting the administrator insert the code himself wherever a curriculum display was needed and instead implemented a plug-in for the CKEditor (<https://www.drupal.org/project/ckeditor>) which inserts the code automatically on the click of a button. The plug-in is registered with drupal in the `stukowin_ckeditor_plugin()` method. It is then defined in the `plugin.js` file and the dialog for inserting a curriculum view is defined in the `stukowin_curriculum.js` file.

Note

In order for this plug-in to work properly, some settings have to be made in the CKEditor. This is described in the operator manual.

##### 1.4.4.3 Graph.js

The main task of displaying the curricula in the client's browser is performed by this file. It fetches the data from the JSON interfaces described [above](#) and creates the DOM elements in the browser. It also registers click handlers for things such as expanding/reducing a course, showing prerequisites and selecting a different curriculum.

Note

The display layout is configured in the `curriculum_style.css` file (not included in this documentation)

As an example, the output could look like this:

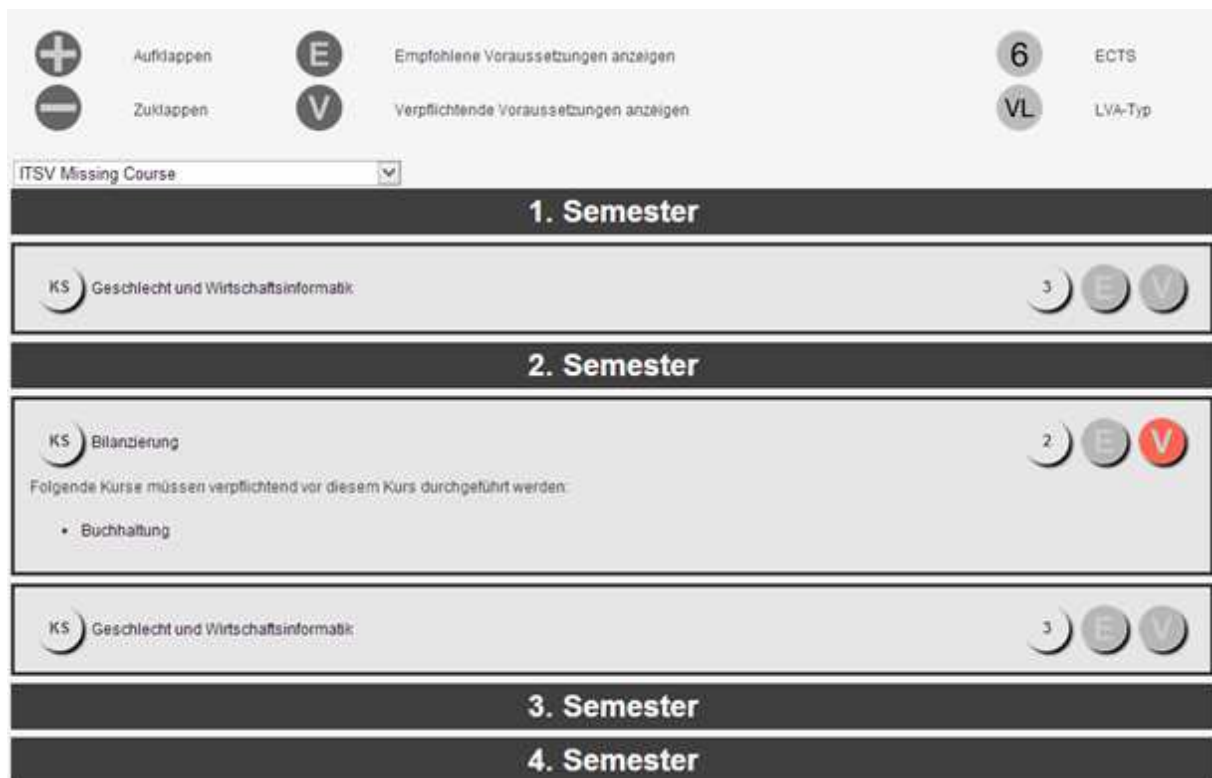


Figure 7: Graphical Representation

See also

[Drupal2AGG](#)

#### 1.4.5 Other

All of the components described above need to work together somehow and at the same time be accessible to Drupal itself. For this reason there are several methods and files to ensure a smooth cooperation, some of which are worth mentioning explicitly:

- The [content\\_manager](#) class is responsible for accessing the imported curricula data
- The [stukowin.install](#) file is responsible for installing and uninstalling the module and all the data structures that come with it
- The [stukowin\\_menu\(\)](#) function sets up all the callback URLs
- The [stukowin\\_admin\(\)](#) function is responsible for the configuration menu
- The [stukowin.info](#) file contains all meta information about the module

## 1.5 Development

### 1.5.1 Authors

## Note

Every file, class, method and member is documented with an `@author` tag. The person tagged as `@author` (thus being shown as the author) is the main/initial author of that file, class, method or member.

All other authors, (people that have helped during initial development, fixed bugs or made changes) are tagged with the `@authors` (plural) tag, thus being shown under Authors(plural).

If a file, class, method or member has been authored by multiple people equally, all of them are tagged with the `@authors` tag and there is no `@author`.

If you have any questions regarding the system, feel free to contact the respective author.

The following list shows an overview of every person that has participated in writing this module, with a quick summary of what they have mostly contributed to:

- Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)  
Main author of the [PDF generation component](#) and the [graph.js](#) file. Participating author in most files/components.
- Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)  
Mostly responsible for the [CEUS import](#) and the [Module Core](#)
- Werner Breuer - [bluescreenwerner@gmail.com](mailto:bluescreenwerner@gmail.com)  
Co-author of the [CKEditor Plug-in](#) and the [Drupal2AGG](#) component in general, as well as the [Drupal2ITSV](#) component. Participated in a lot of debugging.
- Markus Gutmayer - [m.gutmayer@gmail.com](mailto:m.gutmayer@gmail.com)  
Co-author of the [CKEditor Plug-in](#) and the [Drupal2AGG](#) component in general, as well as the [Drupal2ITSV](#) component. Participated in a lot of debugging.
- Fabian Puehringer - [f.puehringer@24speed.at](mailto:f.puehringer@24speed.at)  
Assistance with [Drupal2PDF](#) and [Drupal2AGG](#)
- Manuel Muehlburger - [Hansbert92@googlemail.com](mailto:Hansbert92@googlemail.com)  
Layout and design for the [Drupal2AGG](#) component (mainly the [Graph.js](#))

### 1.5.2 Version Numbers

Every file and class has a version number, composed of four parts: major.minor.revision date

- Major signifies a major release, such as the initial release
- Minor signifies the addition of a new feature
- Revision signifies a bug fix or something similarly small
- Date shows when the last change was made to the source code (in the format "YYYY-MM-DD")

### 1.5.3 Version Control

When the project started, there were two groups, each of which used a different version control system. Group 1 used SVN on <http://cloudforge.com> while group 2 used <http://bitbucket.org>. When the two groups were merged, the SVN repository was dropped. Due to privilege problems with bitbucket, it was decided to move the entire repository to <http://github.com>, as everyone had access there. At the time writing this documentation, the repository is available at <http://github.com/↵TheJake123/DrupalModul>.

As the repository is open source, the commit, issue and change history can be publicly viewed. Additionally, every file, class, method and member has been documented with a `@since` tag with the following format: "Commit <hash> on YYYY-MM-DD", so that it is easily visible when a file, class, method or member has been added.



## 1.6 Included Libraries/Files

For the PDF generation, the free and open source library [TCPDF](#) is used and included in the project.

For parsing course relationships, the [simple\\_html\\_dom.php](#) file is used

## 2 Module Index

### 2.1 Modules

Here is a list of all modules:

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## 3 Hierarchical Index

### 3.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

<a href="#">ceus_importer</a>	39
<a href="#">content_manager</a>	54
<a href="#">EXSTYPE</a>	59
<a href="#">TCPDF</a>	79
<a href="#">overviewPDF</a>	60

## 4 Data Structure Index

### 4.1 Data Structures

Here are the data structures with brief descriptions:

<a href="#">ceus_importer</a>	Imports data from CEUS and stores it in the Drupal database	39
<a href="#">content_manager</a>	Access to drupal vocabularies and content nodes	54
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<a href="#">overviewPDF</a>	Class for PDF document generation from curricula data	60
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## 5 File Index

### 5.1 File List

Here is a list of all files with brief descriptions:

<a href="#">ceus_importer.inc.php</a>	Imports data from CEUS	79
<a href="#">content_manager.inc.php</a>	Access to curricula data	80
<a href="#">exparse.h</a>		81
<a href="#">getopt.h</a>		90
<a href="#">graph.js</a>	Script for nicely displaying CEUS data	91
<a href="#">pdf_creator.inc.php</a>	PDF document generation from curricula data	108
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## 6 Module Documentation

### 6.1 CEUS2Drupal

Module for importing data from CEUS.

Files

- file [ceus\\_importer.inc.php](#)  
Imports data from CEUS.

Data Structures

- class [ceus\\_importer](#)  
Imports data from CEUS and stores it in the Drupal database.

Functions

- [stukowin\\_pre\\_retrieve](#) (\$form, &\$form\_state)  
Menu callback for import ("admin/settings/stukowin/import")
- [stukowin\\_pre\\_retrieve\\_submit](#) (\$form, &\$form\_state)  
Submit handler for [stukowin\\_pre\\_retrieve\(\)](#)

### 6.1.1 Detailed Description

Module for importing data from CEUS.

This module is responsible for requesting the data from the CEUS API and storing it in the drupal database. It also implements the functions for the change management.

For a more detailed description see [CEUS2Drupal](#)

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### 6.1.2 Function Documentation

#### 6.1.2.1 `stukowin_pre_retrieve ( $form, & $form_state )`

Menu callback for import ("admin/settings/stukowin/import")

Used as a warning before starting the import, as the process usually takes a long time to complete.

Remarks

There is nothing to do in this menu except click "Ok".

Parameters

array	<code>\$form</code>	Form structure as given by Drupal
array	<code>\$form_state</code>	Form state as given by Drupal

Returns

The filled out form structure

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Version

1.0.0 2014-07-16

Since

Commit [bcbd4ba](#) on 2014-06-30

See also

`stukowin_re_retrieve_submit()`

Definition at line 248 of file `stukowin.module`.

#### 6.1.2.2 `stukowin_pre_retrieve_submit ( $form, & $form_state )`

Submit handler for [stukowin\\_pre\\_retrieve\(\)](#)

Starts the import process and displays the outcome to the user.

## Parameters

array	\$form	Form structure as given by Drupal
array	\$form_state	Form state as given by Drupal

## Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

## Version

1.0.0 2014-07-16

## Since

Commit [bcbd4ba](#) on 2014-06-30

## See also

[stukowin\\_pre\\_retrieve\(\)](#)

Definition at line 275 of file stukowin.module.

## 6.2 Drupal2AGG

Module for transforming CEUS data to a proper graphical representation.

### Files

- file [graph.js](#)  
Script for nicely displaying CEUS data.
- file [stukowin\\_curriculum.js](#)  
The stukowin\_curriculum dialog definition.
- file [plugin.js](#)  
Registers the CKEditor plugin.

### Functions

- [stukowin\\_get\\_crclm\\_taxonomy](#) (\$iVID)  
JSON service for the nested array of courses details for one curriculum.
- [stukowin\\_get\\_crclm\\_list](#) ()  
JSON service for a list of all currently published curricula.
- [stukowin\\_get\\_lva](#) (\$iNodeID)  
JSON service for the details of a single course.
- [stukowin\\_ckeditor\\_plugin](#) ()  
implements hook\_ckeditor\_plugin
- [stukowin\\_theme\\_registry\\_alter](#) (&\$theme\_registry)  
implements hook\_theme\_registry\_alter

### 6.2.1 Detailed Description

Module for transforming CEUS data to a proper graphical representation.

This module contains all files, classes and methods that provide the functionality for automatically generating a visual representation of the imported curricula data.

### 6.2.2 Drupal JSON Interface

To make the curricula data available to clients, several JSON interfaces have been implemented that make curricula publicly reachable. This is needed so that the client browser can properly display the curricula.

The following interfaces are available:

Name	Path	Input Parameter	Description
Curriculum List	stukowin/crclmst	"currtype" : Type of curriculum to get ("Bachelorstudium" or "Masterstudium") "taxtypes" : Types of vocabularies to get ("curriculum", "itsv" and/or "specialisation")	Returns a list of all curricula currently published (weight < 0), like <a href="#">list.php</a>

Curriculum Tree	stukowin/crcIm	Vocabulary id of the curriculum to get	Returns the curriculum tree of one curriculum, containing all courses and their details
Single course	stukowin/lva	Node id of the course to get	Returns the details of a single course

All of these interfaces are defined in the `stukowin.module` file.

### 6.2.3 CKEditor Plug-in

As the dynamic display of curricula in the browser requires a strict HTML document structure, we refrained from letting the administrator insert the code himself wherever a curriculum display was needed and instead implemented a plug-in for the CKEditor (<https://www.drupal.org/project/ckeditor>) which inserts the code automatically on the click of a button. The plug-in is registered with drupal in the `stukowin_ckeditor_plugin()` method. It is then defined in the `plugin.js` file and the dialog for inserting a curriculum view is defined in the `stukowin_curriculum.js` file.

#### Note

In order for this plug-in to work properly, some settings have to be made in the CKEditor. This is described in the operator manual.

### 6.2.4 Graph.js

The main task of displaying the curricula in the client's browser is performed by this file. It fetches the data from the JSON interfaces described [above](#) and creates the DOM elements in the browser. It also registers click handlers for things such as expanding/reducing a course, showing prerequisites and selecting a different curriculum.

#### Note

The display layout is configured in the `curriculum_style.css` file (not included in this documentation)

As an example, the output could look like this:

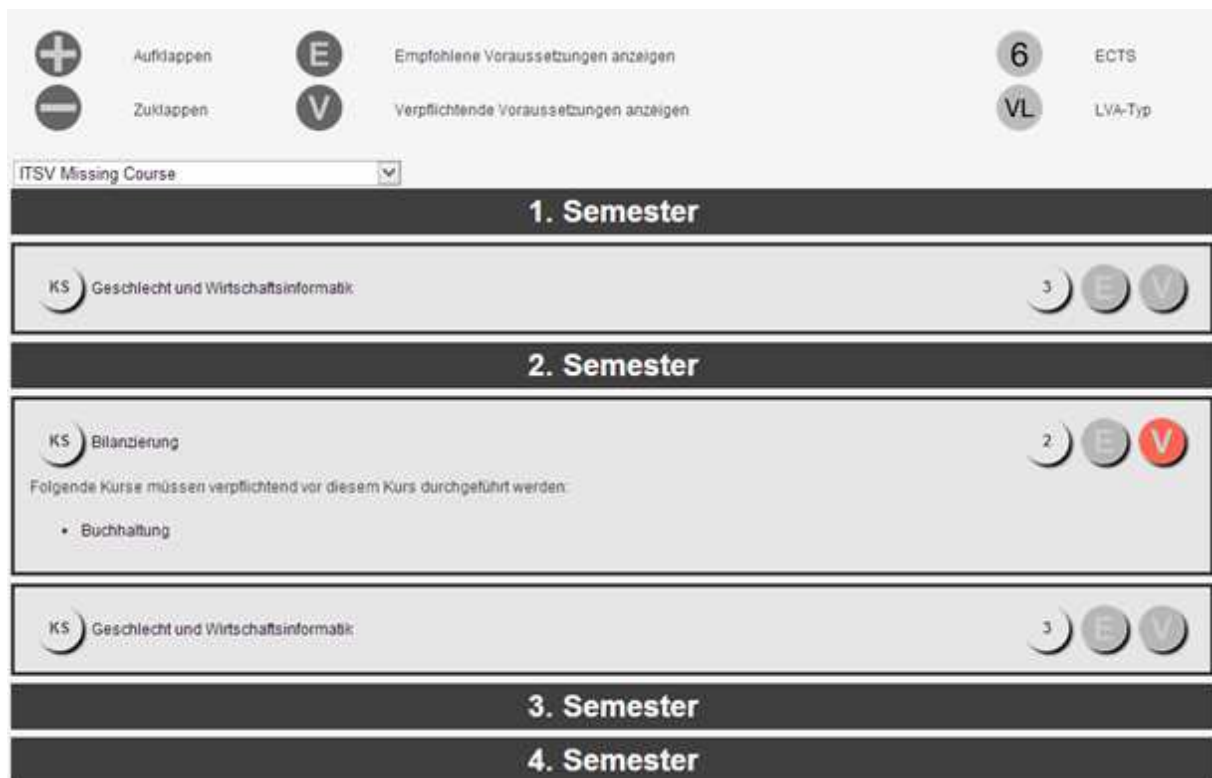


Figure 8: Graphical Representation

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## 6.2.5 Function Documentation

6.2.5.1 `stukowin_ckeditor_plugin ( )`

implements `hook_ckeditor_plugin`

Adds the hook for the [ckeditor plugin](#) to insert a curriculum display.

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## Version

1.0.0 2014-07-16

## Since

Commit [b63de89](#) on 2014-07-01

Definition at line 599 of file `stukowin.module`.

6.2.5.2 `stukowin_get_crclm_list ( )`

JSON service for a list of all currently published curricula.

The type of curriculum (e.g. "Bachelorstudium", "Masterstudium"), types of taxonomies (e.g. "curriculum", "itsv" or "specialisation") and the language (e.g. "de") can be given as HTTP GET parameters through the respective parameter names "currtype", "taxtypes" and "lang".

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Version

1.0.0 2014-07-16

Since

Commit [d179abc](#) on 2014-06-28

See also

[content\\_manager::getCurricula\(\)](#)

Definition at line 317 of file `stukowin.module`.

6.2.5.3 `stukowin_get_crclm_taxonomy ( $iVID )`

JSON service for the nested array of courses details for one curriculum.

Parameters

integer	<code>\$iVID</code>	The Drupal vocabulary id of the curriculum to get
---------	---------------------	---

Author

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Version

1.0.0 2014-07-16

Since

Commit [d179abc](#) on 2014-06-28

See also

[content\\_manager::json\\_service\\_curriculum\(\)](#)

Definition at line 297 of file `stukowin.module`.

6.2.5.4 `stukowin_get_lva ( $iNodeID )`

JSON service for the details of a single course.



## Parameters

integer	<code>\$iNodeID</code>	The Drupal content node id of the course to get
---------	------------------------	---

## Author

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## Version

1.0.0 2014-07-16

## Since

Commit [d179abc](#) on 2014-06-28

## See also

[content\\_manager::json\\_service\\_lva\(\)](#)

Definition at line 351 of file stukowin.module.

6.2.5.5 stukowin\_theme\_registry\_alter ( & \$theme\_registry )

implements hook\_theme\_registry\_alter

Hook for telling the system to use our template on stukowin custom content type.

## Parameters

object	<code>\$theme_registry</code>	The entire cache of theme registry information, post-processing.
--------	-------------------------------	--

## Authors

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## Version

1.0.0 2014-07-16

## Since

Commit [9f1f3db](#) on 2014-07-05

Definition at line 632 of file stukowin.module.

## 6.3 Drupal2PDF

Module to create PDF documents from curricula data.

### Files

- file [pdf\\_creator.inc.php](#)  
PDF document generation from curricula data.

### Data Structures

- class [overviewPDF](#)  
Class for PDF document generation from curricula data.

### Functions

- [stukowin\\_pdf\\_menu](#) (\$form, &\$form\_state)  
Menu callback for generating PDF documents ("admin/settings/stukowin/pdf")
- [stukowin\\_pdf\\_menu\\_submit](#) (\$form, &\$form\_state)  
Submit handler for [stukowin\\_pdf\\_menu\(\)](#)

#### 6.3.1 Detailed Description

Module to create PDF documents from curricula data.

This module contains all files, classes and methods that provide the functionality for automatically generating PDF documents from the imported curricula data.

In order to permanently and easily archive past curricula there is the option to automatically create a course overview PDF document from the imported courses. For this component to work properly, the necessary settings have to be made in advance (see module configuration image above). The administrator is provided with a new menu (at admin/settings/stukowin/pdf) where the curriculum to be archived can be selected. Once he clicks on "Create PDF", the PDF generation in [overviewPDF::createPDF\(\)](#) is started. (All of the PDF generation code is contained in the [pdf\\_creator.inc.php](#) file)

The PDF generation process will flow as shown in the included [FlowchartDrupal2PDF.pdf](#) file.

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#### 6.3.2 Function Documentation

##### 6.3.2.1 [stukowin\\_pdf\\_menu](#) ( \$form, & \$form\_state )

Menu callback for generating PDF documents ("admin/settings/stukowin/pdf")

The user can choose between all currently published curriculum taxonomies. If none are available, a warning message is displayed.

## Parameters

array	<code>\$form</code>	Form structure as given by Drupal
array	<code>\$form_state</code>	Form state as given by Drupal

## Returns

The filled out form structure

## Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

## Version

1.0.0 2014-07-16

## Since

Commit [e6573f8](#) on 2014-06-30

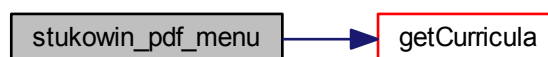
## See also

[stukowin\\_pdf\\_menu\\_submit\(\)](#)

Definition at line 183 of file stukowin.module.

References [getCurricula\(\)](#).

Here is the call graph for this function:



### 6.3.2.2 stukowin\_pdf\_menu\_submit ( `$form`, & `$form_state` )

Submit handler for [stukowin\\_pdf\\_menu\(\)](#)

Creates an instance of [overviewPDF](#) and starts the document generation. If successful, the full path of the generated document is displayed.

## Parameters

array	<code>\$form</code>	Form structure as given by Drupal
array	<code>\$form_state</code>	Form state as given by Drupal

## Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Version

1.0.0 2014-07-16

Since

Commit [e6573f8](#) on 2014-06-30

See also

[stukowin\\_pdf\\_menu\(\)](#)  
[overviewPDF::createPDF\(\)](#)

Definition at line 225 of file stukowin.module.

## 6.4 Module Core

Module that contains core functionality.

### Files

- file [content\\_manager.inc.php](#)  
Access to curricula data.
- file [stukowin.install](#)  
Install script.

### Data Structures

- class [content\\_manager](#)  
Access to drupal vocabularies and content nodes.

### Functions

- [stukowin\\_install\(\)](#)  
Implements hook\_install().
- [\\_stukowin\\_installed\\_taxonomy\\_fields\(\)](#)  
Contains the array of additional vocabulary fields.
- [\\_stukowin\\_installed\\_taxonomy\\_instances\(\)](#)  
Contains the array of additional fields for vocabulary instances.
- [\\_stukowin\\_installed\\_fields\(\)](#)  
Contains the array of additional fields for the stukowin content node type.
- [\\_stukowin\\_installed\\_instances\(\)](#)  
Contains the array of additional fields for the stukowin content node type.
- [\\_stukowin\\_relation\\_types\(\)](#)  
Contains custom relation types for recommendations and requirements.
- [\\_stukowin\\_create\\_relation\\_types\(\)](#)  
Creates the relation type.
- [stukowin\\_uninstall\(\)](#)  
Implements hook\_uninstall().
- [stukowin\\_admin\(\)](#)  
Menu callback for module settings ("admin/stukowin/settings")
- [stukowin\\_menu\(\)](#)  
Implements hook\_menu().

#### 6.4.1 Detailed Description

Module that contains core functionality.

This module contains all files, classes and methods that provide the core functionality of the Drupal module. The members of this group ensure a working cooperation between all of the components and Drupal.

### Authors

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### 6.4.2 Function Documentation

#### 6.4.2.1 `_stukowin_create_relation_types ( )`

Creates the relation type.

This method creates the relation type for course recommendations and requirements

Version

1.0.0 2014-07-07

Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

Since

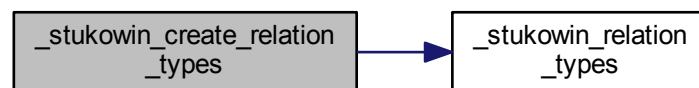
Commit [d179abc](#) on 2014-06-28

Definition at line 629 of file `stukowin.install`.

References `_stukowin_relation_types()`.

Referenced by `stukowin_install()`.

Here is the call graph for this function:



Here is the caller graph for this function:



#### 6.4.2.2 `_stukowin_installed_fields ( )`

Contains the array of additional fields for the `stukowin` content node type.

Return a structured array defining the fields created by this content type. The additional fields are:

- `ceusid`

- code
- ects
- wst
- verantname
- verantemail
- changedate
- lvtypname
- lvtypshort
- lvatype
- typename
- ziele
- lehrinhalte
- voraussetzungen
- voraussetzung
- empfehlung
- term of the course as received from CEUS and saved in Drupal.

#### Returns

A structured array for Drupal field generation

#### Version

1.0.0 2014-07-07

#### Author

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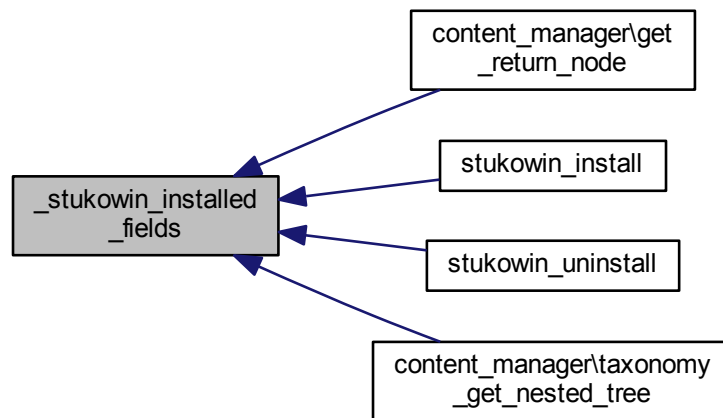
#### Since

Commit [d179abc](#) on 2014-06-28

Definition at line 209 of file stukowin.install.

Referenced by `content_manager::get_return_node()`, `stukowin_install()`, `stukowin_uninstall()`, and `content_manager::taxonomy_get_nested_tree()`.

Here is the caller graph for this function:



#### 6.4.2.3 `_stukowin_installed_instances ( )`

Contains the array of additional fields for the stukowin content node type.

Return a structured array defining and describing in greater detail the fields created by this content type. The additional fields are:

- ceusid
- code
- ect
- wst
- verantname
- verantemail
- changedate
- lvtypname
- lvtypshort
- lvatype
- typename
- ziele
- lehrinhalte
- voraussetzungen
- voraussetzung
- empfehlung
- term of the course as received from CEUS and saved in Drupal.



## Returns

A structured array for Drupal field generation

## Version

1.0.0 2014-07-07

## Author

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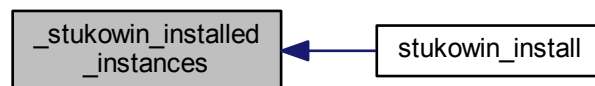
## Since

Commit [d179abc](#) on 2014-06-28

Definition at line 334 of file stukowin.install.

Referenced by `stukowin_install()`.

Here is the caller graph for this function:



#### 6.4.2.4 `_stukowin_installed_taxonomy_fields ( )`

Contains the array of additional vocabulary fields.

Returns a structured array defining the custom fields for vocabularies. The additional fields are:

- faculty
- version
- type of curriculum as received from CEUS.

## Returns

A structured array for Drupal field generation

## Version

1.0.0 2014-07-07

## Author

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Since

Commit [d179abc](#) on 2014-06-28

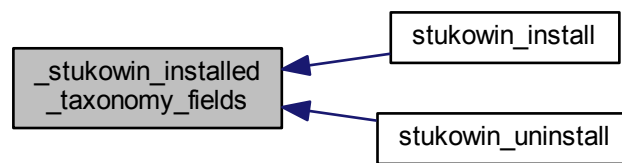
See also

[\\_stukowin\\_installed\\_taxonomy\\_instances\(\)](#)

Definition at line 103 of file stukowin.install.

Referenced by `stukowin_install()`, and `stukowin_uninstall()`.

Here is the caller graph for this function:



#### 6.4.2.5 `_stukowin_installed_taxonomy_instances ( )`

Contains the array of additional fields for vocabulary instances.

Returns a structured array defining and describing in greater detail the custom fields for vocabularies. The additional fields are:

- faculty
- version
- type of curriculum as received from CEUS.

Returns

A structured array for drupal field instance generation

Version

1.0.0 2014-07-07

Author

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Since

Commit [d179abc](#) on 2014-06-28

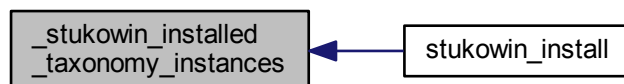
See also

[\\_stukowin\\_installed\\_taxonomy\\_fields\(\)](#)

Definition at line 147 of file `stukowin.install`.

Referenced by `stukowin_install()`.

Here is the caller graph for this function:



#### 6.4.2.6 `_stukowin_relation_types ( )`

Contains custom relation types for recommendations and requirements.

Returns

An array containing the description for recommended and required prerequisite relations.

Version

1.0.0 2014-07-07

Author

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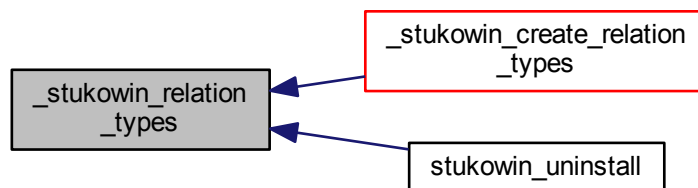
Since

Commit [d179abc](#) on 2014-06-28

Definition at line 607 of file `stukowin.install`.

Referenced by `_stukowin_create_relation_types()`, and `stukowin_uninstall()`.

Here is the caller graph for this function:



6.4.2.7 `stukowin_admin ( )`

Menu callback for module settings ("admin/stukowin/settings")

Form for administration of the module settings This form has the following input fields:

- CEUS API Settings
  - URL to CEUS API
  - Username for CEUS API
  - Password for CEUS API
  - Last Update from CEUS API
- PDF Settings
  - PDF Path
  - PDF generic name

Returns

An array containing the form structure

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Version

1.0.0 2014-07-16

Since

Commit [dl79abc](#) on 2014-06-28

Definition at line 105 of file `stukowin.module`.

6.4.2.8 `stukowin_install ( )`

Implements `hook_install()`.

Sets up drupal for use with the stukowin module.

- Creates the content type for LVA nodes.
- Creates relation types for requirements and recommendations.
- Adds 3 fields to taxonomy nodes for `faculty`, `version` and `type of curriculum`

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Version

1.0.0 2014-07-07

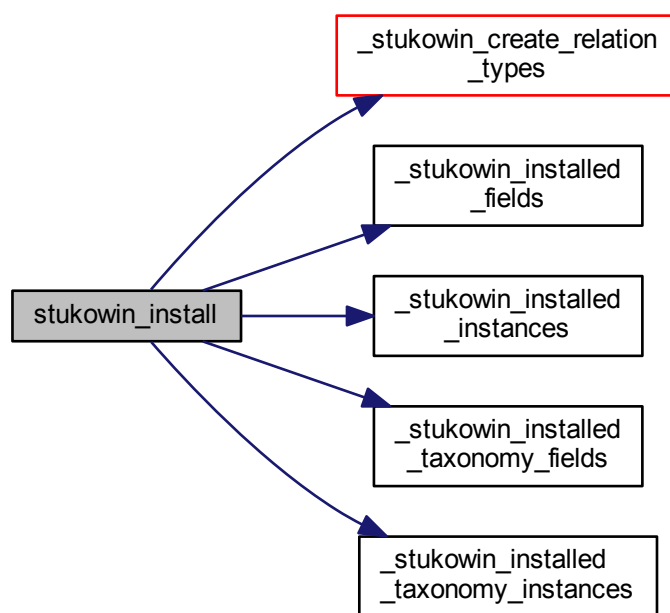
Since

Commit [d179abc](#) on 2014-06-28

Definition at line 30 of file `stukowin.install`.

References `_stukowin_create_relation_types()`, `_stukowin_installed_fields()`, `_stukowin_installed_instances()`, `_stukowin_installed_taxonomy_fields()`, and `_stukowin_installed_taxonomy_instances()`.

Here is the call graph for this function:



#### 6.4.2.9 `stukowin_menu ( )`

Implements `hook_menu()`.

Registers all menu links with Drupal. The following links are registered:

- CEUS API Settings @ 'admin/stukowin/settings'
- CEUS Data import @ 'admin/settings/stukowin/import'
- PDF Generation @ 'admin/settings/stukowin/pdf'
- ITSV/Specialisation Taxonomy Creation @ 'admin/settings/stukowin/taxonomy'
- Curriculum JSON Service @ 'stukowin/crcIm'
- Curricula List JSON Service @ 'stukowin/crcImlst'
- Course Detail JSON Service @ 'stukowin/lva'

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## Version

1.0.0 2014-07-16

## Since

Commit [d179abc](#) on 2014-06-28

## See also

[stukowin\\_pdf\\_menu\(\)](#)  
[stukowin\\_taxonomy\\_menu\(\)](#)  
[stukowin\\_pre\\_retrieve\(\)](#)  
[stukowin\\_admin\(\)](#)  
[stukowin\\_get\\_lva\(\)](#)  
[stukowin\\_get\\_crclm\\_taxonomy\(\)](#)  
[stukowin\\_get\\_crclm\\_list\(\)](#)

Definition at line 507 of file stukowin.module.

6.4.2.10 `stukowin_uninstall ( )`

Implements `hook_uninstall()`.

- Deletes all content nodes
- Deletes all CEUS taxonomies
- Deletes the content type for LVA nodes

## Version

1.0.0 2014-07-09

## Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)  
Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)  
Werner Breuer - [bluescreenwerner@gmail.com](mailto:bluescreenwerner@gmail.com)

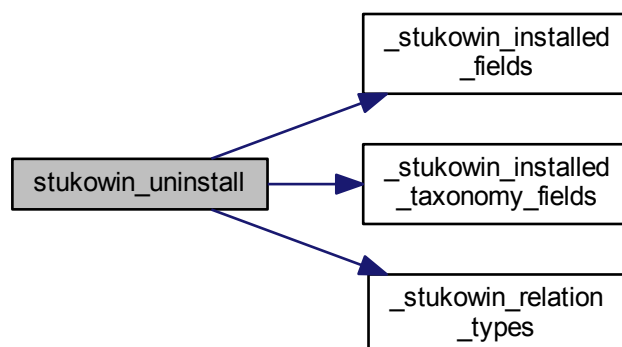
## Since

Commit [2506486](#) on 2014-07-09

Definition at line 662 of file stukowin.install.

References `_stukowin_installed_fields()`, `_stukowin_installed_taxonomy_fields()`, and `_stukowin_relation_types()`.

Here is the call graph for this function:



## 6.5 Drupal2ITSV

Module to create new Drupal ITSV/specialisation vocabularies.

### Functions

- `stukowin_taxonomy_menu` (\$form, &\$form\_state)  
Menu callback for creating a new ITSV or specialisation vocabulary.
- `stukowin_taxonomy_menu_submit` (\$form, &\$form\_state)  
Submit handler for `stukowin_taxonomy_menu()`

### 6.5.1 Detailed Description

Module to create new Drupal ITSV/specialisation vocabularies.

This module contains all files, classes and methods that provide the functionality for supporting the administrator when creating new Drupal vocabularies that represent either an ITSV ("Idealtypischer Studienverlauf") or a specialisation (mainly for Master curricula).

As CEUS does not provide any information about fields of specialisation during the master studies and ideal courses of studies, henceforth called ITSV due to its German name, it was a project requirement that new curricula can be created by the administrator for such purposes.

A freely available Drupal module called Taxonomy Manager (<https://www.drupal.org/project/taxonomy-manager>) gives the administrator the ability to copy vocabulary terms from one vocabulary to another, which is most of the work. Unfortunately, this process cannot be simplified any further. Nevertheless, we tried to at least automate the task of creating a new vocabulary, copying all of the information over from the source curriculum and creating top-level terms (such as "1. Semester" etc.), tasks which will be performed every time a new ITSV or specialisation has to be created.

This component handles exactly that. It inserts a new menu item (at admin/settings/stukowin/taxonomy) where the administrator can select a source curriculum to base the new one on, select whether to create an ITSV or specialisation vocabulary, enter a name and choose how many top-level terms should be inserted. Once the administrator has filled out the form, the new vocabulary is automatically created and the browser is redirected to the Taxonomy Manager's "Dual View", where the administrator can begin copying courses into the new vocabulary.

### Remarks

This component does not have its own file as it does not contain a lot of code. All of its functionality is in the `stukowin.module` file.

### Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

### Authors

Werner Breuer - [bluescreenwerner@gmail.com](mailto:bluescreenwerner@gmail.com)  
Markus Gutmayer - [m.gutmayer@gmail.com](mailto:m.gutmayer@gmail.com)

### 6.5.2 Function Documentation

#### 6.5.2.1 `stukowin_taxonomy_menu` ( \$form, & \$form\_state )

Menu callback for creating a new ITSV or specialisation vocabulary.

Allows the user to



- Select a source vocabulary
- Choose which type of vocabulary to create (ITSV or specialisation)
- Set a name for the new vocabulary
- Choose how many structural terms (e.g. "1. Semester", "2. Semester") to automatically insert

## Parameters

array	\$form	Form structure as given by Drupal
array	\$form_state	Form state as given by Drupal

## Returns

The filled out form structure

## Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

## Version

1.0.0 2014-07-16

## Since

Commit [d179abc](#) on 2014-06-28

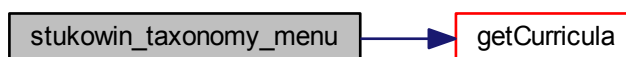
## See also

[stukowin\\_taxonomy\\_menu\\_submit\(\)](#)

Definition at line 376 of file stukowin.module.

References [getCurricula\(\)](#).

Here is the call graph for this function:



6.5.2.2 `stukowin_taxonomy_menu_submit ( $form, & $form_state )`

Submit handler for [stukowin\\_taxonomy\\_menu\(\)](#)

Creates a new ITSV or specialisation vocabulary and redirects the user to the taxonomy manager's dual view.

## Parameters

array	\$form	Form structure as given by Drupal
array	\$form_state	Form state as given by Drupal

## Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

## Version

1.0.0 2014-07-16

## Since

Commit [1905775](#) on 2014-07-02

## See also

[stukowin\\_taxonomy\\_menu\(\)](#)

Definition at line 443 of file stukowin.module.

## 7 Data Structure Documentation

### 7.1 ceus\_importer Class Reference

Imports data from CEUS and stores it in the Drupal database.

#### Public Member Functions

- [\\_\\_construct](#) ()  
Constructor.
- [connect](#) ()  
Connect to CEUS and receive Authtoken.
- [get\\_curricula](#) ()  
Main method: Imports curriculum data from CEUS.
- [get\\_error](#) ()  
Returns last error message.

#### Private Member Functions

- [check\\_return\\_value](#) (\$sReturn)  
Checks the JSON returned by the CEUS API.
- [get\\_detail](#) (\$iID)  
Fetches a single course from CEUS.
- [save\\_node](#) (\$aDetail, \$tid)  
Saves a course as a Drupal content node.
- [has\\_relation](#) (\$sRelationfield)  
Checks if a course has recommendations or prerequisites.
- [parse\\_link\\_term\\_code](#) (\$sLink)  
Parses linked web page and tries to extract a course code.
- [find\\_nodeid\\_by\\_field](#) (\$sFieldtype, \$sFieldcontent)  
Looks for Drupal content node by title or code.
- [get\\_term\\_ids](#) (\$sRelationfield)  
Parses the *voraussetzungen* field of a course and tries to extract the relation.
- [process\\_relations](#) ()  
Creates Drupal relations out of CEUS relations.
- [get\\_details](#) (\$aTree, \$iParentID, \$iCurriculumID)  
Recursive function that traverses a curriculum tree.
- [check\\_vocabulary](#) (\$aCurriculum)  
Checks if a taxonomy vocabulary for the given curriculum exists and creates it if not.
- [get\\_curricula\\_list](#) ()  
Gets a list of all curricula (bachelor, master) from CEUS.
- [get\\_curriculum](#) (\$iID)  
Gets one curriculum tree from CEUS.

#### Private Attributes

- [\\$sCeusUrl](#)  
Complete URL to CEUS API.
- [\\$sUsername](#)  
Username for CEUS API.
- [\\$sPassword](#)

- Password for CEUS API.
- [\\$sAuthToken](#)  
CEUS authentication token.
- [\\$aFiles](#)  
Names of the API methods.
- [\\$sError](#)  
Error message.
- [\\$aLanguage](#)  
All supported languages.
- [\\$aVocabulary](#)  
All vocabularies for current curricula.
- [\\$aTerms](#)  
All Terms for vocabularies.
- [\\$aStats](#)  
Import statistics.
- [\\$aRelations](#)  
Relations of every course (if available)

### 7.1.1 Detailed Description

Imports data from CEUS and stores it in the Drupal database.

This class is used to import data from the CEUS-API and saving them in the Drupal database. It also provides the change management functionality described in the system documentation.

Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

Authors

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)  
Markus Gutmayer - [m.gutmayer@gmail.com](mailto:m.gutmayer@gmail.com)  
Werner Breuer - [bluescreenwerner@gmail.com](mailto:bluescreenwerner@gmail.com)

Version

1.0.0 2014-07-16

Since

Commit [d179abc](#) on 2014-06-28

Definition at line 49 of file ceus\_importer.inc.php.

### 7.1.2 Constructor & Destructor Documentation

#### 7.1.2.1 `__construct ( )`

Constructor.

Creates a new instance of [ceus\\_importer](#) and reads the CEUS API configuration data from Drupal.

## Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

## Version

1.0.0 2014-07-16

## Since

Commit [d179abc](#) on 2014-06-28

## See also

[\\$sCeusUrl](#)  
[\\$sUsername](#)  
[\\$sPassword](#)

Definition at line 201 of file ceus\_importer.inc.php.

### 7.1.3 Member Function Documentation

#### 7.1.3.1 `check_return_value ( $sReturn ) [private]`

Checks the JSON returned by the CEUS API.

This method checks if the CEUS API server responded and if there was an error.

## Parameters

string	<code>\$sReturn</code>	JSON encoded string fetched from the CEUS API
--------	------------------------	---

## Return values

decoded array	Success
false	An error occurred. The error is stored in the <a href="#">\$sError</a> member

## Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

## Version

1.0.0 2014-07-16

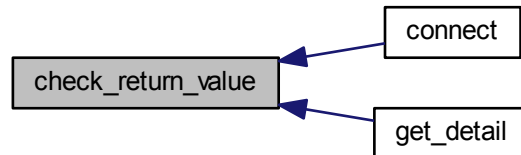
Since

Commit [d179abc](#) on 2014-06-28

Definition at line 221 of file ceus\_importer.inc.php.

Referenced by `connect()`, and `get_detail()`.

Here is the caller graph for this function:



#### 7.1.3.2 `check_vocabulary ( $aCurriculum ) [private]`

Checks if a taxonomy vocabulary for the given curriculum exists and creates it if not.

This function stores the corresponding vocabulary (either a new or an existing one) into the [\\$aVocabulary](#) array.

Remarks

This method creates the new vocabulary with the default weight of 10, but only vocabularies with a weight below 0 will be shown publicly.

Parameters

array	<code>\$aCurriculum</code>	Curriculum from CEUS as returned by <a href="#">get_curricula_list()</a>
-------	----------------------------	--

Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

Version

1.0.0 2014-07-16

Since

Commit [d179abc](#) on 2014-06-28

Definition at line 727 of file ceus\_importer.inc.php.

#### 7.1.3.3 `connect ( )`

Connect to CEUS and receive Authtoken.

This function tries to connect to the CEUS-API server and receives and stores the authtoken. Returns true if an authtoken was recieved otherwise it returns false.

## Return values

true	Connection and authentication successful
false	Connection and/or authentication failed

## Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

## Version

1.0.0 2014-07-16

## Since

Commit [d179abc](#) on 2014-06-28

Definition at line 247 of file ceus\_importer.inc.php.

References [check\\_return\\_value\(\)](#).

Here is the call graph for this function:



#### 7.1.3.4 find\_nodeid\_by\_field ( \$sFieldtype, \$sFieldcontent ) [private]

Looks for Drupal content node by title or code.

This function searches for the Drupal content node corresponding to a given course code or course title.

## Parameters

string	\$sFieldtype	The name of the field to search in. This can be either "code" or "title".
string	\$sFieldcontent	The search term to look for

## Return values

nid	The node's id
false	No content node with this title or code could be found

## Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

## Version

1.0.0 2014-07-16

## Since

Commit [d179abc](#) on 2014-06-28

See also

[get\\_term\\_ids\(\)](#)

Definition at line 450 of file ceus\_importer.inc.php.

#### 7.1.3.5 get\_curricula ( )

Main method: Imports curriculum data from CEUS.

This is the main public method of this class. It does the following things:

1. Reset the statistics
2. Imports all curricula
3. Create a new vocabulary if none exists
4. Load course data from CEUS API
5. Process relations
6. Store everything into the Drupal database

Return values

success message	The import was successful. This message contains the <a href="#">import statistics</a> .
false	An error has occurred and the import was not successful.

Authors

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Version

1.0.0 2014-07-16

Since

Commit [d179abc](#) on 2014-06-28

See also

[get\\_curricula\\_list\(\)](#)  
[check\\_vocabulary\(\)](#)  
[get\\_curriculum\(\)](#)  
[get\\_details\(\)](#)  
[process\\_relations\(\)](#)

Definition at line 691 of file ceus\_importer.inc.php.



#### 7.1.3.6 `get_curricula_list ( ) [private]`

Gets a list of all curricula (bachelor, master) from CEUS.

This function retrieves a list of all available curricula from the CEUS API.

Returns

Associative array containing all curricula

Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

Version

1.0.0 2014-07-16

Since

Commit [d179abc](#) on 2014-06-28

Definition at line 769 of file `ceus_importer.inc.php`.

#### 7.1.3.7 `get_curriculum ( $iID ) [private]`

Gets one curriculum tree from CEUS.

This function retrieves the complete tree of one certain curriculum from the CEUS API

Parameters

integer	<code>\$iID</code>	CEUS id of the curriculum
---------	--------------------	---------------------------

Returns

Nested array of course ids

Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

Version

1.0.0 2014-07-16

Since

Commit [d179abc](#) on 2014-06-28

Definition at line 787 of file `ceus_importer.inc.php`.

#### 7.1.3.8 `get_detail ( $iID ) [private]`

Fetches a single course from CEUS.

This function fetches a single course from the CEUS API and returns all its details in an array.

## Parameters

integer	<code>\$iID</code>	CEUS id of the course
---------	--------------------	-----------------------

## Return values

details	2-dimensional array containing the course details. 1. dimension = language, 2. dimension = details.
false	An error occured while fetching the details

## Authors

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)  
 Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

## Version

1.0.0 2014-07-16

## Since

Commit [d179abc](#) on 2014-06-28

## See also

[get\\_details\(\)](#)

Definition at line 274 of file `ceus_importer.inc.php`.

References [check\\_return\\_value\(\)](#).

Here is the call graph for this function:



### 7.1.3.9 `get_details ( $aTree, $iParentID, $iCurriculumID ) [private]`

Recursive function that traverses a curriculum tree.

This method goes through all the courses of a curriculum that have been returned by CEUS recursively and reads the details for each course into the `$aTerms` array. A vocabulary term is created for each item in the respective curriculum.

## Parameters

array	<code>\$aTree</code>	The current subtree in the curriculum
integer	<code>\$iParentID</code>	Drupal term id of this course's parent term

integer	<code>\$iCurriculum↔ ID</code>	CEUS id of the curriculum this tree belongs to
---------	------------------------------------	--

Return values

true	Courses have been read
false	The subtree has reached a leaf

Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

Version

1.0.0 2014-07-16

Since

Commit [d179abc](#) on 2014-06-28

See also

[get\\_detail\(\)](#)

Definition at line 638 of file `ceus_importer.inc.php`.

7.1.3.10 `get_error ( )`

Returns last error message.

This function acts as a public getter for the [error message](#).

Returns

string

Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

Version

1.0.0 2014-07-16

Since

Commit [d179abc](#) on 2014-06-28

See also

[\\$sError](#)

Definition at line 804 of file `ceus_importer.inc.php`.

7.1.3.11 `get_term_ids ( $sRelationfield ) [private]`

Parses the `voraussetzungen` field of a course and tries to extract the relation.

This function loops through all links and list items in the `voraussetzugnen` field and tries to extracts the referenced courses. It does this in 3 steps:

1. Extract the course names
2. Try to get the Drupal content node id through the course title
3. Try to get the Drupal content node id through the course code

## Parameters

string	\$sRelationfield	Textual content of the voraussetzungen field as received from C↵EUS
--------	------------------	---

## Returns

Drupal content node ids of related courses

## Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

## Version

1.0.0 2014-07-16

## Since

Commit [d179abc](#) on 2014-06-28

## See also

[find\\_nodeid\\_by\\_field\(\)](#)  
[parse\\_link\\_term\\_code\(\)](#)

Definition at line 486 of file ceus\_importer.inc.php.

7.1.3.12 `has_relation ( $sRelationfield ) [private]`

Checks if a course has recommendations or prerequisites.

This function determines if a course has a relation with another course. This is the case when the \$s↵Relationfield is not empty and does not begin with "kein" (case insensitive). Returns true if there are any relations that need to be processed. Return false if the arent any.

## Parameters

string	\$sRelationfield	Content of the courses voraussetzungen field
--------	------------------	--

## Return values

true	The course has recommendations or prerequisites
false	The course does not have recommendations or prerequisites

## Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

## Version

1.0.0 2014-07-16

## Since

Commit [d179abc](#) on 2014-06-28

Definition at line 404 of file ceus\_importer.inc.php.

7.1.3.13 `parse_link_term_code ( $sLink ) [private]`

Parses linked web page and tries to extract a course code.

This function tries to extract the course code (e.g. 1FENKF) from website behind the given \$sLink and returns it.

## Parameters

string	\$sLink	HTML-Code with Link to CEUS entry
--------	---------	-----------------------------------

## Return values

course code	The extracted code
false	The extraction was not successful

## Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

## Version

1.0.0 2014-07-16

## Since

Commit [d179abc](#) on 2014-06-28

## See also

[get\\_term\\_ids\(\)](#)

Definition at line 423 of file ceus\_importer.inc.php.

7.1.3.14 process\_relations ( ) [private]

Creates Drupal relations out of CEUS relations.

This procedure loops through [\\$aRelations](#), parses the voraussetzungen field of each course, generates relations for required and suggested courses and stores them in the node

## Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

## Version

1.0.0 2014-07-16

## Since

Commit [d179abc](#) on 2014-06-28

## See also

[get\\_term\\_ids\(\)](#)

Definition at line 534 of file ceus\_importer.inc.php.

7.1.3.15 save\_node ( \$aDetail, \$tid ) [private]

Saves a course as a Drupal content node.

If a node already exists, the function checks if the changedate has changed. If so, a new version of this content node is created. If not, nothing is changed



#### 7.1.4.2 \$aLanguage [private]

Initial value:

```
= array (
    'de',
    'en'
)
```

All supported languages.

This array contains the short names of all languages that should be imported.

Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

Since

Commit [d179abc](#) on 2014-06-28

Definition at line 127 of file ceus\_importer.inc.php.

#### 7.1.4.3 \$aRelations [private]

Relations of every course (if available)

This array contains all relations (recommended and needed) in their raw textual form It is filled during the import and evaluated at the end.

The key is the CEUS id of the cours, the value contains the content text of the voraussetzungen field from CEUS.

Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

Since

Commit [d179abc](#) on 2014-06-28

Definition at line 186 of file ceus\_importer.inc.php.

#### 7.1.4.4 \$aStats [private]

Initial value:

```
= array (
    'loaded' => 0,
    'new' => 0,
    'updated' => 0,
    'numcurrs' => 0,
    'relations' => 0
)
```

Import statistics.

This array contains all necessary import statistics, namely:

- The number of courses loaded from CEUS
- The number of new content nodes created (= new courses)
- The number of content nodes that were updated during the import (= changes in CEUS)
- The number of curricula loaded from CEUS
- the number of relations automatically processed

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [5ad002c](#) on 2014-07-08

Definition at line 167 of file `ceus_importer.inc.php`.

7.1.4.5 `$aTerms` [private]

All Terms for vocabularies

This array contains all terms for the curriculum. It is a multidimensional array with the following structure:

[private]



#### 7.1.4.8 \$sCeusUrl [private]

Complete URL to CEUS API.

This variable contains the URL to the CEUS API as retrieved from the module configuration.

Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

Since

Commit [d179abc](#) on 2014-06-28

Definition at line 58 of file ceus\_importer.inc.php.

#### 7.1.4.9 \$sError [private]

Error message.

If an error has occurred, this variable contains the error message.

Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

Since

Commit [d179abc](#) on 2014-06-28

Definition at line 117 of file ceus\_importer.inc.php.

#### 7.1.4.10 \$sPassword [private]

Password for CEUS API.

This variable contains the password for the CEUS API as retrieved from the module configuration.

Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

Since

Commit [d179abc](#) on 2014-06-28

Definition at line 78 of file ceus\_importer.inc.php.

#### 7.1.4.11 \$sUsername [private]

Username for CEUS API.

This variable contains the username for the CEUS API as retrieved from the module configuration.

Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

Since

Commit [d179abc](#) on 2014-06-28

Definition at line 68 of file ceus\_importer.inc.php.

The documentation for this class was generated from the following file:

- [ceus\\_importer.inc.php](#)

## 7.2 content\_manager Class Reference

Access to drupal vocabularies and content nodes.

### Public Member Functions

- [get\\_return\\_node](#) (\$iNodeID, \$sLang= 'de')  
Gets course details.
- [taxonomy\\_get\\_nested\\_tree](#) (\$vid\_or\_terms=array(), \$max\_depth=NULL, \$parent=0, \$parents←\_index=array(), \$depth=0)  
Gets vocabulary tree.
- [json\\_service\\_lva](#) (\$iNodeID)  
Returns course as JSON object.
- [getCurricula](#) (\$sCurrType= ", \$aVocabularyTypes=array('curriculum'), \$sLang= 'de')  
Gets multiple curricula.
- [getUniqueMachineName](#) (\$sCoreName)  
Gets a unique and valid machine name.
- [getCurriculum](#) (\$iVID)  
Gets one the curriculum.
- [json\\_service\\_curriculum](#) (\$iVID)  
Returns curriculum tree as JSON array.

### 7.2.1 Detailed Description

Access to drupal vocabularies and content nodes.

This class is used to fetch LVA-nodes and vocabulary trees from the drupal database. As it is a utility class, it has mainly `public` functions.

### Authors

Werner Breuer - [bluescreenwerner@gmail.com](mailto:bluescreenwerner@gmail.com)  
 Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)  
 Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

### Version

1.0.0 2014-07-07

### Since

Commit [f90560a](#) on 2014-06-28

Definition at line 32 of file `content_manager.inc.php`.

### 7.2.2 Member Function Documentation

#### 7.2.2.1 `get_return_node ( $iNodeID, $sLang = 'de' )`

Gets course details.

This method returns the drupal content node corresponding to the given `$iNodeID` in the given `$sLang` with all fields required for displaying the course either in the [PDF document](#) or in the [curriculum display](#) (i.e. the fields set in `_stukowin_installed_fields()`).

## Parameters

integer	<code>\$iNodeID</code>	Drupal id of the content node
string	<code>\$sLang</code>	Language to return. Default is 'de'.

## Returns

The selected course with all the needed attributes as properties

## Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

## Since

Commit [58a583a](#) on 2014-06-29

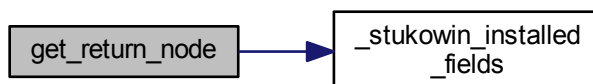
## See also

[\\_stukowin\\_installed\\_fields\(\)](#)  
[taxonomy\\_get\\_nested\\_tree\(\)](#)

Definition at line 54 of file `content_manager.inc.php`.

References `_stukowin_installed_fields()`.

Here is the call graph for this function:



7.2.2.2 `getCurricula ( $sCurrType = "", $aVocabularyTypes = array('curriculum'), $sLang = 'de' )`

Gets multiple curricula.

This method reads all curricula of curriculum type `$sCurrType` and vocabulary types `$aVocabularyTypes` in the language `$sLang` from the drupal database and returns them as an associative array.

## Parameters

string	<code>\$sCurrType</code>	The type of curriculum to get. Valid values are <ul style="list-style-type: none"> <li>• Bachelorstudium</li> <li>• Masterstudium</li> </ul>
--------	--------------------------	--

array	\$aVocabulary↔ Types	The taxonomy types to get. Default is 'curriculum'. Valid values are <ul style="list-style-type: none"> <li>• curriculum</li> <li>• itsv</li> <li>• schwerpunkt</li> </ul>
string	\$sLang	The language to get the curricula in. Default is 'de'

Returns

Associative array of selected curricula

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [1905775](#) on 2014-07-02

Definition at line 189 of file content\_manager.inc.php.

#### 7.2.2.3 getCurriculum ( \$iVID )

Gets one the curriculum.

This function fetches the curriculum object with the given vocabulary id (\$iVID) from the database.

Note: it does not fetch the vocabulary tree, just its meta-information.

Parameters

integer	\$iVID	The vid of the curriculum vocabulary
---------	--------	--------------------------------------

Returns

An associative array representing the curriculum object

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [1905775](#) on 2014-07-02

Definition at line 268 of file content\_manager.inc.php.

#### 7.2.2.4 getUniqueMachineName ( \$sCoreName )

Gets a unique and valid machine name.

This function asserts that a machine name is valid and adds incrementing numbers at the end until it is also unique.

## Parameters

string	<code>\$sCoreName</code>	The initial name
--------	--------------------------	------------------

## Returns

The unique and valid machine name

## Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

## Since

Commit [1905775](#) on 2014-07-02

## See also

[stukowin\\_taxonomy\\_menu\\_submit\(\)](#)  
[ceus\\_importer::check\\_vocabulary\(\)](#)

Definition at line 230 of file `content_manager.inc.php`.

7.2.2.5 `json_service_curriculum ( $iVID )`

Returns curriculum tree as JSON array.

This method gets the entire tree of the curriculum with the vocabulary id `$iVID` and returns it as a JSON array.

## Parameters

integer	<code>\$iVID</code>	Drupal vocabulary id of the desired curriculum
---------	---------------------	--

## Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

## Since

Commit [f90560a](#) on 2014-06-28

## See also

[taxonomy\\_get\\_nested\\_tree\(\)](#)

Definition at line 294 of file `content_manager.inc.php`.

7.2.2.6 `json_service_lva ( $iNodeID )`

Returns course as JSON object.

This method fetches a single course from the drupal database and returns it as JSON.

## Parameters

---

integer	<code>\$iNodeID</code>	Content node id of the desired course
---------	------------------------	---------------------------------------

Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

Since

Commit [f90560a](#) on 2014-06-28

See also

[stukowin\\_get\\_lva\(\)](#)

Definition at line 155 of file `content_manager.inc.php`.

```
7.2.2.7 taxonomy_get_nested_tree ( $vid_or_terms = array(), $max_depth = NULL, $parent
= 0, $parents_index = array(), $depth = 0 )
```

Gets vocabulary tree.

This is a recursive function that reads an entire drupal vocabulary into a nested array. It can be called externally by giving the vocabulary id (vid) as the first parameter and leaving the other parameters empty.

Parameters

integer   array	<code>\$vid_or_terms</code>	The vid of the curriculum to get. Default is an empty array
integer	<code>\$max_depth</code>	The maximum depth of the nested array. Default is NULL
integer	<code>\$parent</code>	The drupal term id (tid) of the next term's parent term. Default is 0
array	<code>\$parents_index</code>	An array of all parents that have been traversed by the method in earlier recursion steps. Default is an empty array
integer	<code>\$depth</code>	The current recursion depth. Default is 0

Returns

The nested array of all courses in the vocabulary

Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

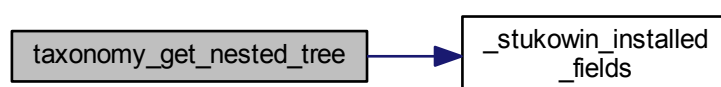
Since

Commit [f90560a](#) on 2014-06-28

Definition at line 106 of file `content_manager.inc.php`.

References `_stukowin_installed_fields()`.

Here is the call graph for this function:



The documentation for this class was generated from the following file:

- [content\\_manager.inc.php](#)

### 7.3 EXSTYPE Union Reference

```
#include <exparse.h>
```

#### Data Fields

- struct Exnode\_s \* [expr](#)
- double [floating](#)
- struct Exref\_s \* [reference](#)
- struct Exid\_s \* [id](#)
- Sflong\_t [integer](#)
- int [op](#)
- char \* [string](#)
- void \* [user](#)
- struct Exbuf\_s \* [buffer](#)

#### 7.3.1 Detailed Description

Definition at line 208 of file `exparse.h`.

#### 7.3.2 Field Documentation

##### 7.3.2.1 struct Exbuf\_s\* buffer

Definition at line 222 of file `exparse.h`.

##### 7.3.2.2 struct Exnode\_s\* expr

Definition at line 214 of file `exparse.h`.

##### 7.3.2.3 double floating

Definition at line 215 of file `exparse.h`.

##### 7.3.2.4 struct Exid\_s\* id

Definition at line 217 of file `exparse.h`.

##### 7.3.2.5 Sflong\_t integer

Definition at line 218 of file `exparse.h`.

##### 7.3.2.6 int op

Definition at line 219 of file `exparse.h`.

##### 7.3.2.7 struct Exref\_s\* reference

Definition at line 216 of file `exparse.h`.

##### 7.3.2.8 char\* string

Definition at line 220 of file `exparse.h`.

## 7.3.2.9 void\* user

Definition at line 221 of file exparse.h.

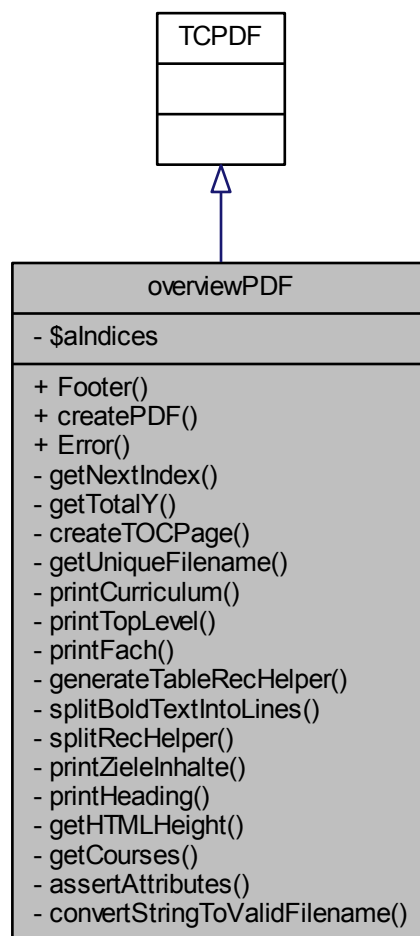
The documentation for this union was generated from the following file:

- [exparse.h](#)

## 7.4 overviewPDF Class Reference

Class for PDF document generation from curricula data.

Inheritance diagram for overviewPDF:



## Public Member Functions

- [Footer](#) ()  
Generates Footer for each page.
- [createPDF](#) (\$iVID)  
Creates the PDF document.



- [Error](#) (\$msg)  
Throws exception in case of an error.

#### Private Member Functions

- [getNextIndex](#) (\$iLevel)  
Gets index of the desired level.
- [getTotalY](#) ()  
Gets the full y-position in the document.
- [createTOCPage](#) ()  
Adds a table of contents page to the PDF document.
- [getUniqueFilename](#) (\$sCurrType, \$sCurrVersion)  
Creates a unique filename.
- [printCurriculum](#) (\$oCurriculum)  
Prints a curriculum object and all its courses to the PDF document.
- [printTopLevel](#) (\$oTopLevel)  
Decides whether to print a structural element or a subject.
- [printFach](#) (\$oFach)  
Prints a subject to the PDF document.
- [generateTableRecHelper](#) (\$oCourse)  
Recursive function for generating overview table.
- [splitBoldTextIntoLines](#) (\$sText, \$iMaxWidth)  
Inserts line breaks into bold text.
- [splitRecHelper](#) (\$aWords, \$iCurrIndex, \$iMaxWidth)  
Recursive helper function for [splitBoldTextIntoLines\(\)](#)
- [printZieleInhalte](#) (\$oCourse)  
Prints the course goals and content of teaching and their respective headings to the document.
- [printHeading](#) (\$sText, \$iLevel, \$bShowIndex=true, \$sAlign= 'L', \$bAddBookmark=true)  
Prints a heading to the PDF document.

#### Static Private Member Functions

- static [getHTMLHeight](#) (\$sHTML)  
Determines height of HTML Code.
- static [getCourses](#) (\$currId)  
Gets all courses for a given curriculum id.
- static [assertAttributes](#) (\$oCourse)  
Guarantees the existence of the specified attributes in the course and all its children.
- static [convertStringToValidFilename](#) (\$sString)  
Utility method that formats a string into a valid file name.

#### Private Attributes

- [\\$aIndices](#) = array ()  
Array of indices for continuous indexation of headings.

#### 7.4.1 Detailed Description

Class for PDF document generation from curricula data.

This class provides the functionality for automatically generating a PDF document from a curriculum. It is publicly accessible through the [createPDF\(\)](#) method, which initiates and guides the PDF generation.

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Authors

Fabian Puehringer - [f.puehringer@24speed.at](mailto:f.puehringer@24speed.at)

Version

1.0.2 2014-07-22

Since

Commit [b9342d9](#) on 2014-06-30

See also

[createPDF\(\)](#)

Definition at line 62 of file pdf\_creator.inc.php.

#### 7.4.2 Member Function Documentation

##### 7.4.2.1 static assertAttributes ( \$oCourse ) [static], [private]

Guarantees the existence of the specified attributes in the course and all its children.

This is a recursive helper method which asserts that the following attributes exist in the course object:

- title
- ects
- wst
- lvatype
- typename
- ziele
- lehrinhalte
- lvtypshort
- typename

Needed so that the other methods do not have to check everytime an attribute is accessed.

## Parameters

object	\$oCourse	The course to assert the attributes for
--------	-----------	---

## Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

## Since

Commit [b9342d9](#) on 2014-06-30

Definition at line 653 of file pdf\_creator.inc.php.

Referenced by `getCourses()`.

Here is the caller graph for this function:



#### 7.4.2.2 static convertStringToValidFilename ( \$sString ) [static], [private]

Utility method that formats a string into a valid file name.

## Parameters

string	\$sString	The file name to validate
--------	-----------	---------------------------

## Returns

The valid file name created from the input

## Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

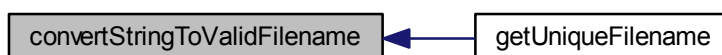
## Since

Commit [f157d51](#) on 2014-07-06

Definition at line 687 of file pdf\_creator.inc.php.

Referenced by `getUniqueFilename()`.

Here is the caller graph for this function:



## 7.4.2.3 createPDF ( \$iVID )

Creates the PDF document.

This method is the main public method of the [overviewPDF](#) class. It manages the entire document generation and saves the PDF to the preconfigured path. The steps for creating the document are as follows:

1. Set up PDF document
2. Set document meta information
3. Set up title page
4. Initiate printing of individual subjects
5. Add index page
6. Save the document

Parameters

integer	\$iVID	Drupal vocabulary id of the desired Curriculum
---------	--------	--

Returns

Success message: 'PDF successfully created at ' and the filepath

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [b9342d9](#) on 2014-06-30

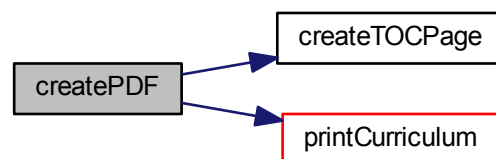
See also

[stukowin\\_pdf\\_menu\(\)](#)  
[stukowin\\_pdf\\_menu\\_submit\(\)](#)

Definition at line 195 of file pdf\_creator.inc.php.

References [createTOCPage\(\)](#), and [printCurriculum\(\)](#).

Here is the call graph for this function:



#### 7.4.2.4 `createTOCPage ( ) [private]`

Adds a table of contents page to the PDF document.

This method is called at the end of the document creation, after all subjects have been printed to the document, and inserts a table of contents (index) page as the second page in the document.

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [b9342d9](#) on 2014-06-30

See also

`TCPDF::addTOCPage()`  
[printHeading\(\)](#)

Definition at line 262 of file `pdf_creator.inc.php`.

Referenced by `createPDF()`.

Here is the caller graph for this function:



#### 7.4.2.5 `Error ( $msg )`

Throws exception in case of an error.

This method is needed for displaying errors as drupal messages, due to [TCPDF](#) normally displaying errors by itself and the dying.

Parameters

string	<code>\$msg</code>	The error message to throw the exception with
--------	--------------------	---

Exceptions

Exception	A new exception with the given message
-----------	--

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [e4fa523](#) on 2014-07-02

See also

`TCPDF::Error()`

Definition at line 245 of file `pdf_creator.inc.php`.

## 7.4.2.6 Footer ( )

Generates Footer for each page.

This method draws a 1px line across the entire page 15mm above the bottom and writes the page number in the format "current page/total pages" into the bottom right corner.

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [b9342d9](#) on 2014-06-30

See also

TCPDF::Footer()

Definition at line 86 of file pdf\_creator.inc.php.

## 7.4.2.7 generateTableRecHelper ( \$oCourse ) [private]

Recursive function for generating overview table.

This is a recursive helper function for generating a subject overview table. It traverses the nested array of courses down to the leaves and creates a table row for each course.

- Subjects are printed in bold
- Modules are printed in italics
- Courses are printed in normal text

Parameters

object	\$oCourse	The course to generate the table HTML code for
--------	-----------	--

Returns

The HTML code of the table rows for this course and all its children

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [b9342d9](#) on 2014-06-30

See also

[printFach\(\)](#)

Definition at line 452 of file pdf\_creator.inc.php.

References [splitBoldTextIntoLines\(\)](#).

Referenced by [printFach\(\)](#).

Here is the call graph for this function:



Here is the caller graph for this function:



7.4.2.8 `static getCourses ( $currId ) [static], [private]`

Gets all courses for a given curriculum id.

This method gets all the courses in a curriculum and prepares them for further processing in the PDF creation process.

Parameters

integer	<code>\$currId</code>	The vocabulary id of the curriculum to get the courses from
---------	-----------------------	---

Returns

The nested array of all courses in the given curriculum

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [b9342d9](#) on 2014-06-30

Definition at line 623 of file pdf\_creator.inc.php.

References `assertAttributes()`.

Referenced by `printCurriculum()`.

Here is the call graph for this function:



Here is the caller graph for this function:



#### 7.4.2.9 static `getHTMLHeight ( $sHTML ) [static], [private]`

Determines height of HTML Code.

This utility method prints `$sHTML` to a test instance of [overviewPDF](#) and determines what height the HTML code has if printed.

This method is needed for evaluating whether an HTML table would fit into the remaining space on the page or if it would be broken into two pages.

Returns

The height of the HTML code

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [b9342d9](#) on 2014-06-30



See also

[printFach\(\)](#)

Definition at line 141 of file pdf\_creator.inc.php.

Referenced by [printFach\(\)](#).

Here is the caller graph for this function:



#### 7.4.2.10 getNextIndex ( \$iLevel ) [private]

Gets index of the desired level.

This utility method manages the [\\$aIndices](#) array and determines what heading index comes next in the given `$iLevel` (e.g. 1, 2, 3 etc.).

If some levels have been skipped (e.g. the first call to this method is with `$iLevel = 3`), it fills up the missing array values with 1.

After it has determined the correct index, it increments the corresponding value in the array by 1.

Parameters

integer	<code>\$iLevel</code>	Level for which the index is wanted
---------	-----------------------	-------------------------------------

Returns

The next index on the given level. One single integer (i.e. not "1.1.2")

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [b9342d9](#) on 2014-06-30

Definition at line 113 of file pdf\_creator.inc.php.

Referenced by [printHeading\(\)](#).

Here is the caller graph for this function:



#### 7.4.2.11 getTotalY ( ) [private]

Gets the full y-position in the document.

This utility method determines the current y position in relation to the beginning of the document, not just the current page (like TCPDF::GetY()), excluding top and bottom margins.

This method is needed to compare positions in the document across pages.

Returns

Full y-position in the entire document (not just on this page), excluding margins

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [b9342d9](#) on 2014-06-30

See also

[getHTMLHeight\(\)](#)  
TCPDF::GetY()

Definition at line 168 of file pdf\_creator.inc.php.

#### 7.4.2.12 getUniqueFilename ( \$sCurrType, \$sCurrVersion ) [private]

Creates a unique filename.

Determines if a file with the standard filename as defined in the module settings already exists. If one exists, it appends a number and increases it until the name is not already taken.

Also, it creates the directory into which the document should be saved according to the module settings (if it does not already exist).

Parameters

string	\$sCurrType	The type of the curriculum (Bachelorstudium, Masterstudium)
string	\$sCurrVersion	The version of the curriculum (e.g. 2013W)

Returns

The unique filename

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [e8704fd](#) on 2014-06-30

See also

[stukowin\\_admin\(\)](#)

Definition at line 291 of file pdf\_creator.inc.php.

References `convertStringToValidFilename()`.

Here is the call graph for this function:



#### 7.4.2.13 `printCurriculum ( $oCurriculum ) [private]`

Prints a curriculum object and all its courses to the PDF document.

This method does the following things:

1. Print the curriculum name as a heading
2. Create an overview table with all the subjects it contains
3. Print the details of each subject to the document

Parameters

object	<code>\$oCurriculum</code>	The curriculum object to print
--------	----------------------------	--------------------------------

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

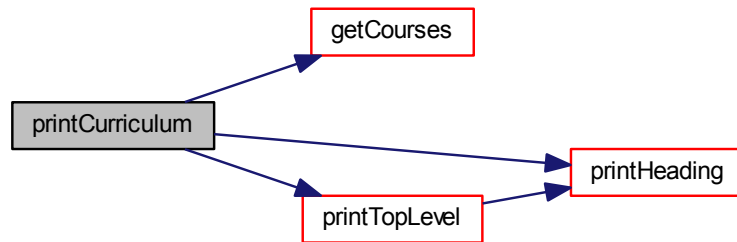
Commit [b9342d9](#) on 2014-06-30

Definition at line 328 of file pdf\_creator.inc.php.

References `getCourses()`, `printHeading()`, and `printTopLevel()`.

Referenced by `createPDF()`.

Here is the call graph for this function:



Here is the caller graph for this function:



#### 7.4.2.14 `printFach ( $oFach ) [private]`

Prints a subject to the PDF document.

This method prints the subject title and details, an overview of all its subcourses and their details to the document.

Parameters

object	<code>\$oFach</code>	The course object to print
--------	----------------------	----------------------------

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

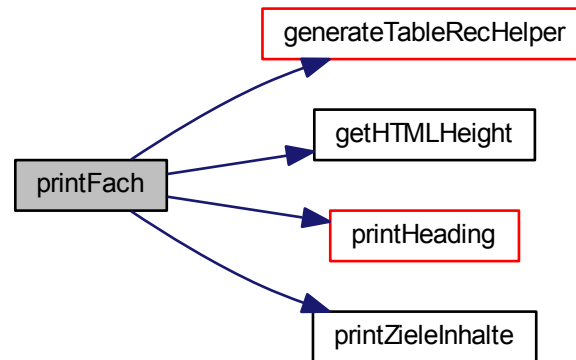
Commit [b9342d9](#) on 2014-06-30

Definition at line 396 of file pdf\_creator.inc.php.

References `generateTableRecHelper()`, `getHTMLHeight()`, `printHeading()`, and `printZieleInhalte()`.

Referenced by `printTopLevel()`.

Here is the call graph for this function:



Here is the caller graph for this function:



7.4.2.15 `printHeading ( $sText, $iLevel, $bShowIndex = true, $sAlign = 'L', $bAddBookmark = true ) [private]`

Prints a heading to the PDF document.

This method manages headings in the document. It automatically indexes the headings using `getNextIndex()` and optionally adds a bookmark for it.

Parameters

string	<code>\$sText</code>	The heading text
int	<code>\$iLevel</code>	The level at which the heading should be created and the bookmark set
boolean	<code>\$bShowIndex</code>	<code>true</code> if the index should be shown in the heading
string	<code>\$sAlign</code>	Alignment of the heading. For allowed values see <code>TCPDF::MultiCell()</code>
boolean	<code>\$bAddBookmark</code>	<code>true</code> if heading should be shown on the index page and bookmarked

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [b9342d9](#) on 2014-06-30

See also

[createTOCPage\(\)](#)  
[getNextIndex\(\)](#)

Definition at line 585 of file pdf\_creator.inc.php.

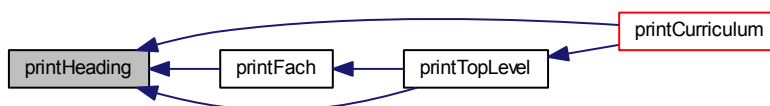
References [getNextIndex\(\)](#).

Referenced by [printCurriculum\(\)](#), [printFach\(\)](#), and [printTopLevel\(\)](#).

Here is the call graph for this function:



Here is the caller graph for this function:



#### 7.4.2.16 printTopLevel ( \$oTopLevel ) [private]

Decides whether to print a structural element or a subject.

This is a dispatcher method that checks if an object is a structural element (1. Semester, 2. Semester etc.) or a course. If calls [printHeading\(\)](#) if it is a structural element and then [printFach\(\)](#) for all its children or just [printFach\(\)](#) if it is a course object.

Parameters

object	<code>\$oTopLevel</code>	The object to check
--------	--------------------------	---------------------

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

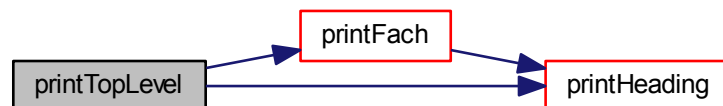
Commit [a311596](#) on 2014-07-02

Definition at line 374 of file pdf\_creator.inc.php.

References `printFach()`, and `printHeading()`.

Referenced by `printCurriculum()`.

Here is the call graph for this function:



Here is the caller graph for this function:



#### 7.4.2.17 `printZieleInhalte ( $oCourse ) [private]`

Prints the course goals and content of teaching and their respective headings to the document.

If one of them is not set or empty, their heading is not printed either.

Parameters

object	<code>\$oCourse</code>	The course to print the goals and contents for
--------	------------------------	--

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [b9342d9](#) on 2014-06-30

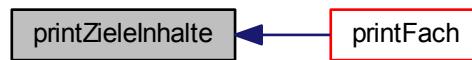
See also

[printFach\(\)](#)

Definition at line 544 of file pdf\_creator.inc.php.

Referenced by `printFach()`.

Here is the caller graph for this function:



#### 7.4.2.18 splitBoldTextIntoLines ( \$sText, \$iMaxWidth ) [private]

Inserts line breaks into bold text.

This method breaks the `$sText` into separate lines which are shorter than `$iMaxWidth` if printed as bold text. If one word alone is too long or the entire string is shorter than `$iMaxWidth`, it is not splitted.

This method is needed in `generateTableRecHelper()` because `TCPDF` does not break the words correctly in a table if the text is written in a `<B>` tag. This caused issues where text would overflow its table cell to the right by a few cm.

Parameters

string	<code>\$sText</code>	The text to split
	<code>\$iMaxWidth</code>	The The maximum width a line is allowed to have

Returns

The `$sText` with `<br>` tags inserted whenever necessary

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [7e5b545](#) on 2014-07-06

Definition at line 496 of file `pdf_creator.inc.php`.

References `splitRecHelper()`.

Referenced by `generateTableRecHelper()`.

Here is the call graph for this function:





Here is the caller graph for this function:



7.4.2.19 `splitRecHelper ( $aWords, $iCurrIndex, $iMaxWidth ) [private]`

Recursive helper function for [splitBoldTextIntoLines\(\)](#)

Parameters

array	<code>\$aWords</code>	The array of words as split in <a href="#">splitBoldTextIntoLines()</a>
integer	<code>\$iCurrIndex</code>	The current index in the array
integer	<code>\$iMaxWidth</code>	The maximum width a line is allowed to have

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [7e5b545](#) on 2014-07-06

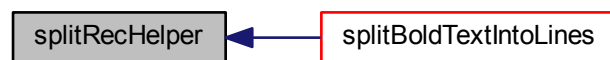
See also

[splitBoldTextIntoLines\(\)](#)

Definition at line 518 of file `pdf_creator.inc.php`.

Referenced by `splitBoldTextIntoLines()`.

Here is the caller graph for this function:



### 7.4.3 Field Documentation

7.4.3.1 `$aIndices = array () [private]`

Array of indices for continuous indexation of headings.

Every key in this array represents an indexation level (e.g. level 2 for 1.1, level 3 for 1.1.1) and every value in the array the current index for that level.

Since

Commit [b9342d9](#) on 2014-06-30

See also

[getNextIndex\(\)](#)

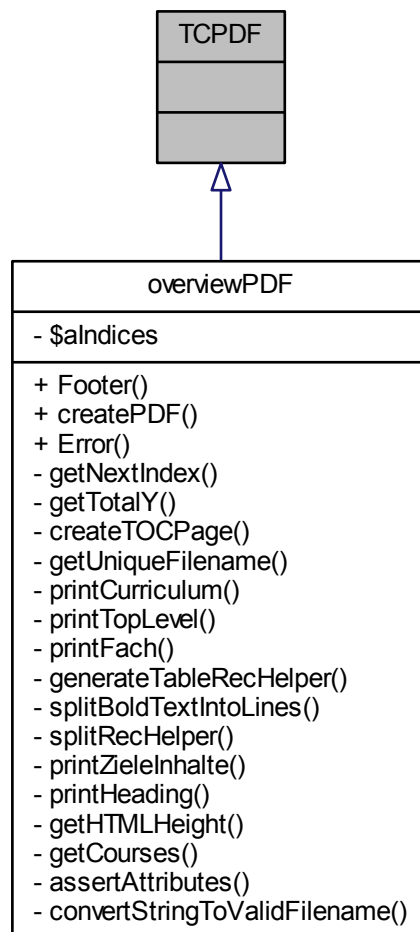
Definition at line 73 of file pdf\_creator.inc.php.

The documentation for this class was generated from the following file:

- [pdf\\_creator.inc.php](#)

## 7.5 TCPDF Class Reference

Inheritance diagram for TCPDF:



The documentation for this class was generated from the following file:

- [pdf\\_creator.inc.php](#)

## 8 File Documentation

### 8.1 ceus\_importer.inc.php File Reference

Imports data from CEUS.

#### Data Structures

- class [ceus\\_importer](#)  
Imports data from CEUS and stores it in the Drupal database.

#### 8.1.1 Detailed Description

Imports data from CEUS.

This file manages the import of curricula data from CEUS.

#### Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

#### Authors

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)  
Markus Gutmayer - [m.gutmayer@gmail.com](mailto:m.gutmayer@gmail.com)  
Werner Breuer - [bluescreenwerner@gmail.com](mailto:bluescreenwerner@gmail.com)

#### Version

1.0.0 2014-07-16

#### Since

Commit [d179abc](#) on 2014-06-28

Definition in file [ceus\\_importer.inc.php](#).

### 8.2 content\_manager.inc.php File Reference

Access to curricula data.

#### Data Structures

- class [content\\_manager](#)  
Access to drupal vocabularies and content nodes.

#### 8.2.1 Detailed Description

Access to curricula data.

This file contains all necessary functionality for accessing the curricula data stored in drupal

## Authors

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Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)  
Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

## Version

1.0.0 2014-07-07

## Since

Commit [f90560a](#) on 2014-06-28

## See also

[content\\_manager](#)

Definition in file [content\\_manager.inc.php](#).

## 8.3 exparse.h File Reference

### Data Structures

- union [EXSTYPE](#)

### Macros

- `#define` [EXTOKENTYPE](#)
- `#define` [MINTOKEN](#) 258
- `#define` [INTEGER](#) 259
- `#define` [UNSIGNED](#) 260
- `#define` [CHARACTER](#) 261
- `#define` [FLOATING](#) 262
- `#define` [STRING](#) 263
- `#define` [VOIDTYPE](#) 264
- `#define` [ADDRESS](#) 265
- `#define` [ARRAY](#) 266
- `#define` [BREAK](#) 267
- `#define` [CALL](#) 268
- `#define` [CASE](#) 269
- `#define` [CONSTANT](#) 270
- `#define` [CONTINUE](#) 271
- `#define` [DECLARE](#) 272
- `#define` [DEFAULT](#) 273
- `#define` [DYNAMIC](#) 274
- `#define` [ELSE](#) 275
- `#define` [EXIT](#) 276
- `#define` [FOR](#) 277
- `#define` [FUNCTION](#) 278
- `#define` [GSUB](#) 279
- `#define` [ITERATE](#) 280
- `#define` [ITERATER](#) 281
- `#define` [ID](#) 282
- `#define` [IF](#) 283

- `#define LABEL` 284
- `#define MEMBER` 285
- `#define NAME` 286
- `#define POS` 287
- `#define PRAGMA` 288
- `#define PRE` 289
- `#define PRINT` 290
- `#define PRINTF` 291
- `#define PROCEDURE` 292
- `#define QUERY` 293
- `#define RAND` 294
- `#define RETURN` 295
- `#define SCANF` 296
- `#define SPLIT` 297
- `#define SPRINTF` 298
- `#define SRAND` 299
- `#define SSCANF` 300
- `#define SUB` 301
- `#define SUBSTR` 302
- `#define SWITCH` 303
- `#define TOKENS` 304
- `#define UNSET` 305
- `#define WHILE` 306
- `#define F2I` 307
- `#define F2S` 308
- `#define I2F` 309
- `#define I2S` 310
- `#define S2B` 311
- `#define S2F` 312
- `#define S2I` 313
- `#define F2X` 314
- `#define I2X` 315
- `#define S2X` 316
- `#define X2F` 317
- `#define X2I` 318
- `#define X2S` 319
- `#define X2X` 320
- `#define XPRINT` 321
- `#define OR` 322
- `#define AND` 323
- `#define NE` 324
- `#define EQ` 325
- `#define GE` 326
- `#define LE` 327
- `#define RS` 328
- `#define LS` 329
- `#define IN` 330
- `#define UNARY` 331
- `#define DEC` 332
- `#define INC` 333
- `#define CAST` 334
- `#define MAXTOKEN` 335
- `#define EXSTYPE_IS_TRIVIAL` 1
- `#define exstype EXSTYPE` /\* obsolescent; will be withdrawn \*/
- `#define EXSTYPE_IS_DECLARED` 1

## Typedefs

- typedef union [EXSTYPE](#) EXSTYPE

## Enumerations

- enum [extokentype](#) {  
[MINTOKEN](#) = 258, [INTEGER](#) = 259, [UNSIGNED](#) = 260, [CHARACTER](#) = 261,  
[FLOATING](#) = 262, [STRING](#) = 263, [VOIDTYPE](#) = 264, [ADDRESS](#) = 265,  
[ARRAY](#) = 266, [BREAK](#) = 267, [CALL](#) = 268, [CASE](#) = 269,  
[CONSTANT](#) = 270, [CONTINUE](#) = 271, [DECLARE](#) = 272, [DEFAULT](#) = 273,  
[DYNAMIC](#) = 274, [ELSE](#) = 275, [EXIT](#) = 276, [FOR](#) = 277,  
[FUNCTION](#) = 278, [GSUB](#) = 279, [ITERATE](#) = 280, [ITERATER](#) = 281,  
[ID](#) = 282, [IF](#) = 283, [LABEL](#) = 284, [MEMBER](#) = 285,  
[NAME](#) = 286, [POS](#) = 287, [PRAGMA](#) = 288, [PRE](#) = 289,  
[PRINT](#) = 290, [PRINTF](#) = 291, [PROCEDURE](#) = 292, [QUERY](#) = 293,  
[RAND](#) = 294, [RETURN](#) = 295, [SCANF](#) = 296, [SPLIT](#) = 297,  
[SPRINTF](#) = 298, [SRAND](#) = 299, [SSCANF](#) = 300, [SUB](#) = 301,  
[SUBSTR](#) = 302, [SWITCH](#) = 303, [TOKENS](#) = 304, [UNSET](#) = 305,  
[WHILE](#) = 306, [F2I](#) = 307, [F2S](#) = 308, [I2F](#) = 309,  
[I2S](#) = 310, [S2B](#) = 311, [S2F](#) = 312, [S2I](#) = 313,  
[F2X](#) = 314, [I2X](#) = 315, [S2X](#) = 316, [X2F](#) = 317,  
[X2I](#) = 318, [X2S](#) = 319, [X2X](#) = 320, [XPRINT](#) = 321,  
[OR](#) = 322, [AND](#) = 323, [NE](#) = 324, [EQ](#) = 325,  
[GE](#) = 326, [LE](#) = 327, [RS](#) = 328, [LS](#) = 329,  
[UNARY](#) = 331, [DEC](#) = 332, [INC](#) = 333, [CAST](#) = 334,  
[MAXTOKEN](#) = 335 }

## Variables

- [EXSTYPE](#) [exlval](#)

### 8.3.1 Macro Definition Documentation

#### 8.3.1.1 [#define](#) ADDRESS 265

Definition at line 132 of file exparse.h.

#### 8.3.1.2 [#define](#) AND 323

Definition at line 190 of file exparse.h.

#### 8.3.1.3 [#define](#) ARRAY 266

Definition at line 133 of file exparse.h.

#### 8.3.1.4 [#define](#) BREAK 267

Definition at line 134 of file exparse.h.

#### 8.3.1.5 [#define](#) CALL 268

Definition at line 135 of file exparse.h.

#### 8.3.1.6 [#define](#) CASE 269

Definition at line 136 of file exparse.h.

8.3.1.7 `#define CAST` 334

Definition at line 201 of file `exparse.h`.

8.3.1.8 `#define CHARACTER` 261

Definition at line 128 of file `exparse.h`.

8.3.1.9 `#define CONSTANT` 270

Definition at line 137 of file `exparse.h`.

8.3.1.10 `#define CONTINUE` 271

Definition at line 138 of file `exparse.h`.

8.3.1.11 `#define DEC` 332

Definition at line 199 of file `exparse.h`.

8.3.1.12 `#define DECLARE` 272

Definition at line 139 of file `exparse.h`.

8.3.1.13 `#define DEFAULT` 273

Definition at line 140 of file `exparse.h`.

8.3.1.14 `#define DYNAMIC` 274

Definition at line 141 of file `exparse.h`.

8.3.1.15 `#define ELSE` 275

Definition at line 142 of file `exparse.h`.

8.3.1.16 `#define EQ` 325

Definition at line 192 of file `exparse.h`.

8.3.1.17 `#define EXIT` 276

Definition at line 143 of file `exparse.h`.

8.3.1.18 `#define exstype EXSTYPE /* obsolescent; will be withdrawn */`

Definition at line 230 of file `exparse.h`.

8.3.1.19 `#define EXSTYPE_IS_DECLARED` 1

Definition at line 231 of file `exparse.h`.

8.3.1.20 `#define EXSTYPE_IS_TRIVIAL` 1

Definition at line 229 of file `exparse.h`.

8.3.1.21 `#define EXTOKENTYPE`

Definition at line 40 of file `exparse.h`.

8.3.1.22 `#define F2I` 307

Definition at line 174 of file `exparse.h`.

8.3.1.23 `#define F2S` 308

Definition at line 175 of file exparse.h.

8.3.1.24 `#define F2X` 314

Definition at line 181 of file exparse.h.

8.3.1.25 `#define FLOATING` 262

Definition at line 129 of file exparse.h.

8.3.1.26 `#define FOR` 277

Definition at line 144 of file exparse.h.

8.3.1.27 `#define FUNCTION` 278

Definition at line 145 of file exparse.h.

8.3.1.28 `#define GE` 326

Definition at line 193 of file exparse.h.

8.3.1.29 `#define GSUB` 279

Definition at line 146 of file exparse.h.

8.3.1.30 `#define I2F` 309

Definition at line 176 of file exparse.h.

8.3.1.31 `#define I2S` 310

Definition at line 177 of file exparse.h.

8.3.1.32 `#define I2X` 315

Definition at line 182 of file exparse.h.

8.3.1.33 `#define ID` 282

Definition at line 149 of file exparse.h.

8.3.1.34 `#define IF` 283

Definition at line 150 of file exparse.h.

8.3.1.35 `#define IN` 330

Definition at line 197 of file exparse.h.

8.3.1.36 `#define INC` 333

Definition at line 200 of file exparse.h.

8.3.1.37 `#define INTEGER` 259

Definition at line 126 of file exparse.h.

8.3.1.38 `#define ITERATE` 280

Definition at line 147 of file exparse.h.



8.3.1.39 `#define ITERATER` 281

Definition at line 148 of file `exparse.h`.

8.3.1.40 `#define LABEL` 284

Definition at line 151 of file `exparse.h`.

8.3.1.41 `#define LE` 327

Definition at line 194 of file `exparse.h`.

8.3.1.42 `#define LS` 329

Definition at line 196 of file `exparse.h`.

8.3.1.43 `#define MAXTOKEN` 335

Definition at line 202 of file `exparse.h`.

8.3.1.44 `#define MEMBER` 285

Definition at line 152 of file `exparse.h`.

8.3.1.45 `#define MINTOKEN` 258

Definition at line 125 of file `exparse.h`.

8.3.1.46 `#define NAME` 286

Definition at line 153 of file `exparse.h`.

8.3.1.47 `#define NE` 324

Definition at line 191 of file `exparse.h`.

8.3.1.48 `#define OR` 322

Definition at line 189 of file `exparse.h`.

8.3.1.49 `#define POS` 287

Definition at line 154 of file `exparse.h`.

8.3.1.50 `#define PRAGMA` 288

Definition at line 155 of file `exparse.h`.

8.3.1.51 `#define PRE` 289

Definition at line 156 of file `exparse.h`.

8.3.1.52 `#define PRINT` 290

Definition at line 157 of file `exparse.h`.

8.3.1.53 `#define PRINTF` 291

Definition at line 158 of file `exparse.h`.

8.3.1.54 `#define PROCEDURE` 292

Definition at line 159 of file `exparse.h`.

8.3.1.55 `#define QUERY` 293

Definition at line 160 of file exparse.h.

8.3.1.56 `#define RAND` 294

Definition at line 161 of file exparse.h.

8.3.1.57 `#define RETURN` 295

Definition at line 162 of file exparse.h.

8.3.1.58 `#define RS` 328

Definition at line 195 of file exparse.h.

8.3.1.59 `#define S2B` 311

Definition at line 178 of file exparse.h.

8.3.1.60 `#define S2F` 312

Definition at line 179 of file exparse.h.

8.3.1.61 `#define S2I` 313

Definition at line 180 of file exparse.h.

8.3.1.62 `#define S2X` 316

Definition at line 183 of file exparse.h.

8.3.1.63 `#define SCANF` 296

Definition at line 163 of file exparse.h.

8.3.1.64 `#define SPLIT` 297

Definition at line 164 of file exparse.h.

8.3.1.65 `#define SPRINTF` 298

Definition at line 165 of file exparse.h.

8.3.1.66 `#define SRAND` 299

Definition at line 166 of file exparse.h.

8.3.1.67 `#define SSCANF` 300

Definition at line 167 of file exparse.h.

8.3.1.68 `#define STRING` 263

Definition at line 130 of file exparse.h.

8.3.1.69 `#define SUB` 301

Definition at line 168 of file exparse.h.

8.3.1.70 `#define SUBSTR` 302

Definition at line 169 of file exparse.h.

8.3.1.71 `#define SWITCH` 303

Definition at line 170 of file `exparse.h`.

8.3.1.72 `#define TOKENS` 304

Definition at line 171 of file `exparse.h`.

8.3.1.73 `#define UNARY` 331

Definition at line 198 of file `exparse.h`.

8.3.1.74 `#define UNSET` 305

Definition at line 172 of file `exparse.h`.

8.3.1.75 `#define UNSIGNED` 260

Definition at line 127 of file `exparse.h`.

8.3.1.76 `#define VOIDTYPE` 264

Definition at line 131 of file `exparse.h`.

8.3.1.77 `#define WHILE` 306

Definition at line 173 of file `exparse.h`.

8.3.1.78 `#define X2F` 317

Definition at line 184 of file `exparse.h`.

8.3.1.79 `#define X2I` 318

Definition at line 185 of file `exparse.h`.

8.3.1.80 `#define X2S` 319

Definition at line 186 of file `exparse.h`.

8.3.1.81 `#define X2X` 320

Definition at line 187 of file `exparse.h`.

8.3.1.82 `#define XPRINT` 321

Definition at line 188 of file `exparse.h`.

8.3.2 Typedef Documentation

8.3.2.1 `typedef union EXSTYPE EXSTYPE`

8.3.3 Enumeration Type Documentation

8.3.3.1 `enum extokentype`

Enumerator

`MINTOKEN`

`INTEGER`

`UNSIGNED`

`CHARACTER`

FLOATING  
STRING  
VOIDTYPE  
ADDRESS  
ARRAY  
BREAK  
CALL  
CASE  
CONSTANT  
CONTINUE  
DECLARE  
DEFAULT  
DYNAMIC  
ELSE  
EXIT  
FOR  
FUNCTION  
GSUB  
ITERATE  
ITERATER  
ID  
IF  
LABEL  
MEMBER  
NAME  
POS  
PRAGMA  
PRE  
PRINT  
PRINTF  
PROCEDURE  
QUERY  
RAND  
RETURN  
SCANF  
SPLIT  
SPRINTF  
SRAND  
SSCANF  
SUB  
SUBSTR  
SWITCH  
TOKENS  
UNSET  
WHILE

F2I  
F2S  
I2F  
I2S  
S2B  
S2F  
S2I  
F2X  
I2X  
S2X  
X2F  
X2I  
X2S  
X2X  
XPRINT  
OR  
AND  
NE  
EQ  
GE  
LE  
RS  
LS  
UNARY  
DEC  
INC  
CAST  
MAXTOKEN

Definition at line 43 of file `exparse.h`.

### 8.3.4 Variable Documentation

#### 8.3.4.1 EXSTYPE `exlval`

## 8.4 `getopt.h` File Reference

### Macros

- `#define` [GETOPT\\_H](#)

### Functions

- `int` [getopt](#) (`int`, `char *const *`, `const char *`)

### Variables

- `char *` [optarg](#)
- `int` [opterr](#)
- `int` [optind](#)
- `int` [optopt](#)

## 8.4.1 Macro Definition Documentation

8.4.1.1 `#define GETOPT_H`

Definition at line 22 of file `getopt.h`.

## 8.4.2 Function Documentation

8.4.2.1 `int getopt ( int , char *const * , const char * )`

## 8.4.3 Variable Documentation

8.4.3.1 `char* optarg`8.4.3.2 `int opterr`8.4.3.3 `int optind`8.4.3.4 `int optopt`

## 8.5 graph.js File Reference

Script for nicely displaying CEUS data.

## Functions

- `jQuery` (document).ready(function()  
Gets a list of all courses.
- function `getCurricula` (data)  
Extracts curricula from JSON.
- function `fill_crclm` (data)  
Extracts top-level courses and fills page with content.
- function `showEmpfohlen` (element)  
Shows or hides recommended courses.
- function `showVoraussetzungen` (element)  
Shows or hides required courses.
- function `expand_reduce` (element)  
Toggles the expansion/reduction of a course <div>
- function `expand_all` ()  
Expands all divs.
- function `reduce_all` ()  
Reduces all divs.
- function `expandAndScrollToElement` (element, highlightColor)  
Expands the curriculum tree down to an element.
- function `createDivs` (kurs, level)  
Creates the <div>s for all courses recursively.
- function `createTds` (kurs)  
Creates the header table cells.
- function `isFullyVisible` (elem)  
Checks if an element is fully visible.
- function `buildRequestURL` (baseUrl, type, curriculums)  
Creates the JSON request URL.
- function `clearDiv` ()  
Empties main <div>

- function `addResources` ()  
Adds missing stylesheets and the jQuery effect library.
- function `fillMissingDetail` (data)  
Fetches course data for missing courses.

#### Variables

- var `kurse` = {}
- var `drupal_root` = ""
- var `jsonCalls` = []

#### 8.5.1 Detailed Description

Script for nicely displaying CEUS data.

This script is responsible for creating the proper html/css/js needed for displaying the graphical representation of CEUS data.

In order for this script to work, a `<div>` with the id "main" and the tags `data-currtype` and `data-curriculums` set needs to be present on the page. Example:

```
<div id="main" data-currtype="Bachelorstudium" data-curriculums="curriculum itsv specialisation">
</div>
```

The graphical representation will look approximately like this:

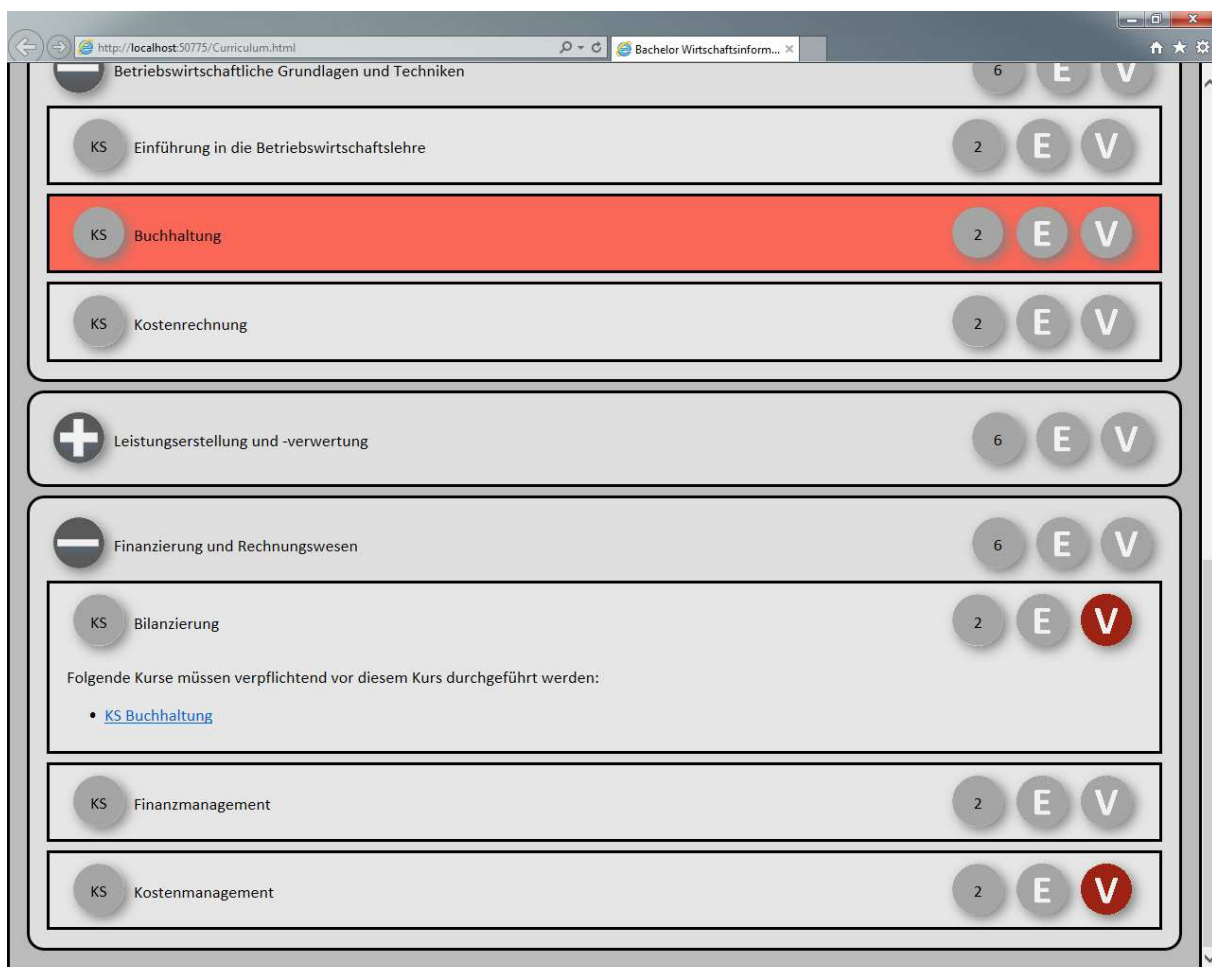


Figure 9: Graphical Display

## Author

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## Authors

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Werner Breuer - [bluescreenwerner@gmail.com](mailto:bluescreenwerner@gmail.com)

## Version

1.0 2014-07-09

## Since

Commit [f90560a](#) on 2014-06-28

Definition in file [graph.js](#).

## 8.5.2 Function Documentation

## 8.5.2.1 function addResources ( )

Adds missing stylesheets and the jQuery effect library.

This utility procedure adds the curriculum\_style.css stylesheet and the jQuery effect library to the document.

## Author

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## Authors

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## Since

Commit [9f5e8a6](#) on 2014-07-05

Definition at line 645 of file graph.js.

References `drupal_root`, and `jQuery()`.

Referenced by `jQuery()`.

Here is the call graph for this function:





Here is the caller graph for this function:



#### 8.5.2.2 function buildRequestURL ( baseUrl, type, curriculums )

Creates the JSON request URL.

This utility function builds the URL for the JSON request based on the main <div>s data tags.

Parameters

baseUrl	Drupal base URL to build the request on (Needed because drupal could be installed under a sub path)
type	The curriculum type to get ("Bachelorstudium","Masterstudium")
curriculums	The vocabulary types to get ("curriculum", "itsv" and/or "specialisation")

Returns

The complete request URL

Author

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Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [58e2eac](#) on 2014-07-02

Definition at line 604 of file graph.js.

Referenced by jQuery().

Here is the caller graph for this function:



## 8.5.2.3 function clearDiv ( )

Empties main <div>

This utility procedure deletes all <div> contents except for the curriculum legend.

Author

Werner Breuer - [bluescreenwerner@gmail.com](mailto:bluescreenwerner@gmail.com)

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Since

Commit [58e2eac](#) on 2014-07-02

Definition at line 630 of file graph.js.

References [jQuery\(\)](#).

Referenced by [fill\\_crclm\(\)](#).

Here is the call graph for this function:



Here is the caller graph for this function:



## 8.5.2.4 function createDivs ( kurs, level )

Creates the <div>s for all courses recursively.

This function creates the entire content of the graphical display recursively. For each course it creates a header table and its children.

## Parameters

kurs	The course to create the <div> for
level	The current recursion level (needed in order to decide if the element is top-level or not)

## Returns

The complete HTML for the given course's <div>

## Authors

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)  
 Markus Gutmayer - [m.gutmayer@gmail.com](mailto:m.gutmayer@gmail.com)  
 Werner Breuer - [bluescreenwerner@gmail.com](mailto:bluescreenwerner@gmail.com)

## Since

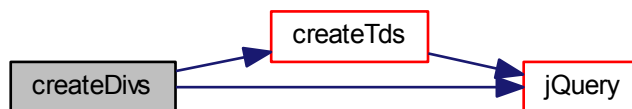
Commit [3372f36](#) on 2014-06-29

Definition at line 459 of file graph.js.

References `createTds()`, `jQuery()`, and `kurse`.

Referenced by `fill_crclm()`.

Here is the call graph for this function:



Here is the caller graph for this function:



#### 8.5.2.5 function `createTds ( kurs )`

Creates the header table cells.

This utility function creates the table cells in the header used in all course, module and subject <div>s. It also requests the details of all courses referenced (as recommendation/prerequisite) but not included in the loaded vocabulary.

## Parameters

kurs	The course to create the cells for
------	------------------------------------

## Returns

The HTML code for the <td>s in the header

## Author

Markus Gutmayer - [m.gutmayer@gmail.com](mailto:m.gutmayer@gmail.com)

## Authors

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)  
Werner Breuer - [bluescreenwerner@gmail.com](mailto:bluescreenwerner@gmail.com)

## Since

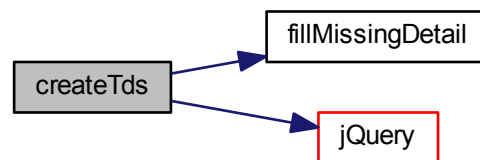
Commit [15c1f4d](#) on 2014-06-30

Definition at line 515 of file graph.js.

References `drupal_root`, `fillMissingDetail()`, `jQuery()`, `jsonCalls`, and `kurse`.

Referenced by `createDivs()`.

Here is the call graph for this function:



Here is the caller graph for this function:



#### 8.5.2.6 function `expand_all ( )`

Expands all divs.

This procedure expands all divs that are currently reduced.

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

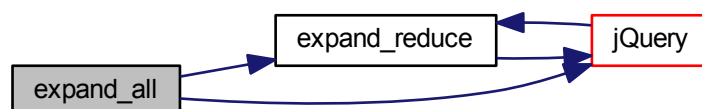
Since

Commit [3372f36](#) on 2014-06-29

Definition at line 383 of file graph.js.

References `expand_reduce()`, and `jQuery()`.

Here is the call graph for this function:



#### 8.5.2.7 function `expand_reduce ( element )`

Toggles the expansion/reduction of a course `<div>`

This procedure expands/reduces a course `<div>`, thus showing or hiding its children.

Parameters

element	The element to expand/reduce
---------	------------------------------

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [3372f36](#) on 2014-06-29

Definition at line 344 of file graph.js.

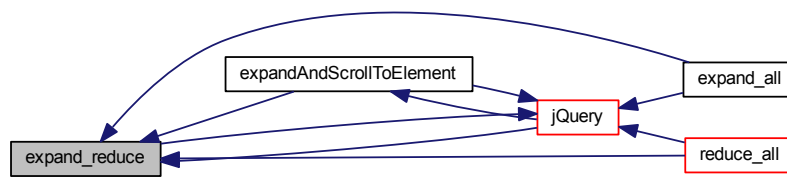
References `drupal_root`, and `jQuery()`.

Referenced by `expand_all()`, `expandAndScrollToElement()`, `jQuery()`, and `reduce_all()`.

Here is the call graph for this function:



Here is the caller graph for this function:



#### 8.5.2.8 function `expandAndScrollToElement ( element, highlightColor )`

Expands the curriculum tree down to an element.

This procedure expands the curriculum tree down to the given element, scrolls to it and then highlights it in the given `highlightColor`.

Parameters

<code>element</code>	The element to expand and scroll to
<code>highlightColor</code>	The color to highlight the element in. Default is <code>#90EE90</code> .

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

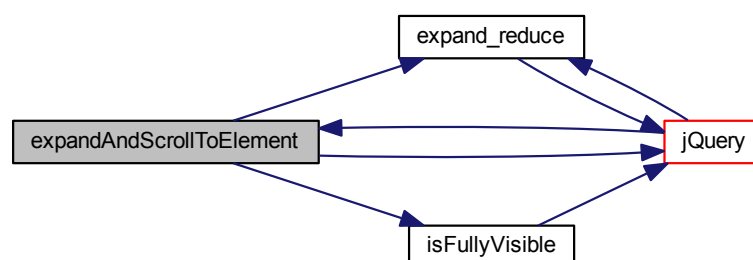
Commit [3372f36](#) on 2014-06-29

Definition at line 417 of file `graph.js`.

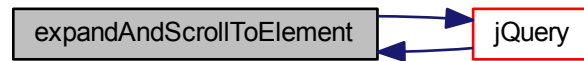
References `expand_reduce()`, `isFullyVisible()`, and `jQuery()`.

Referenced by `jQuery()`.

Here is the call graph for this function:



Here is the caller graph for this function:



#### 8.5.2.9 function fill\_crclm ( data )

Extracts top-level courses and fills page with content.

This event handler extracts the top-level courses out of the JSON-data and fills the page with content by calling `createDivs()`.

Parameters

data	The received JSON file containing the curriculum tree
------	---

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Authors

Markus Gutmayer - [m.gutmayer@gmail.com](mailto:m.gutmayer@gmail.com)

Werner Breuer - [bluescreenwerner@gmail.com](mailto:bluescreenwerner@gmail.com)

Since

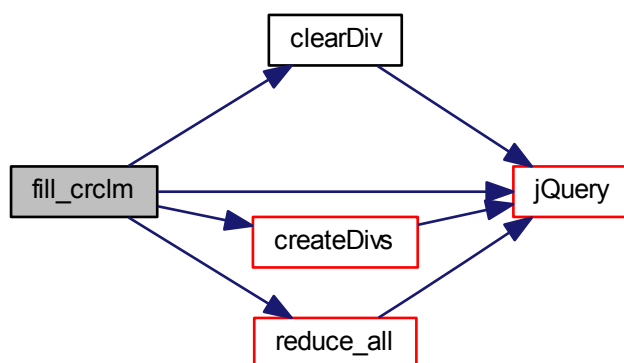
Commit [f90560a](#) on 2014-06-28

Definition at line 223 of file graph.js.

References `clearDiv()`, `createDivs()`, `jQuery()`, `kurse`, and `reduce_all()`.

Referenced by `getCurricula()`.

Here is the call graph for this function:



Here is the caller graph for this function:



#### 8.5.2.10 function fillMissingDetail ( data )

Fetches course data for missing courses.

This utility procedure and event handler is used for fetching the details of all those courses that are not included in the display but referenced as recommendation and/or prerequisite.

Parameters

data	The received JSON details array of one course
------	---

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [f157d51](#) on 2014-07-06

Definition at line 673 of file graph.js.

References `kurse`.

Referenced by `createTds()`.



Here is the caller graph for this function:



#### 8.5.2.11 function getCurricula ( data )

Extracts curricula from JSON.

This event handler extracts the curricula out of the JSON data, fills the select box at the top of the page and calls `fill_crclm()` for the first curriculum.

Parameters

data	The received JSON file containing the curricula list
------	--

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Authors

Markus Gutmayer - [m.gutmayer@gmail.com](mailto:m.gutmayer@gmail.com)

Werner Breuer - [bluescreenwerner@gmail.com](mailto:bluescreenwerner@gmail.com)

Since

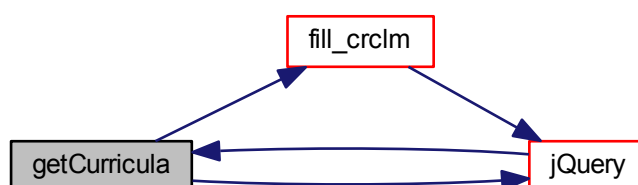
Commit [f90560a](#) on 2014-06-28

Definition at line 168 of file graph.js.

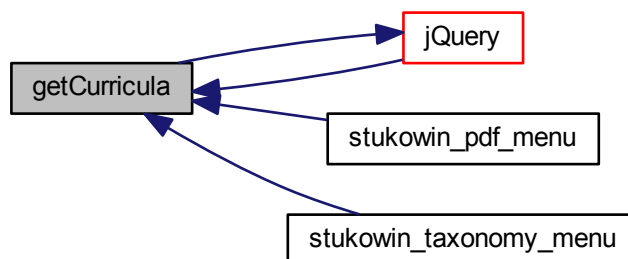
References `drupal_root`, `fill_crclm()`, `jQuery()`, and `jsonCalls`.

Referenced by `jQuery()`, `stukowin_pdf_menu()`, and `stukowin_taxonomy_menu()`.

Here is the call graph for this function:



Here is the caller graph for this function:



#### 8.5.2.12 function `isFullyVisible ( elem )`

Checks if an element is fully visible.

This utility function determines if an element is fully visible on the screen

Parameters

<code>elem</code>	The element to check
-------------------	----------------------

Return values

<code>true</code>	The element is fully visible
<code>false</code>	The element is not fully visible

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

Commit [3372f36](#) on 2014-06-29

Definition at line 573 of file `graph.js`.

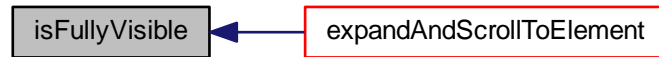
References `jQuery()`.

Referenced by `expandAndScrollToElement()`.

Here is the call graph for this function:



Here is the caller graph for this function:



#### 8.5.2.13 jQuery ( document )

Gets a list of all courses.

This event handler gets a list of all courses from stukowin module's JSON service and sets up event handlers for different events.

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Authors

Markus Gutmayer - [m.gutmayer@gmail.com](mailto:m.gutmayer@gmail.com)

Werner Breuer - [bluescreenwerner@gmail.com](mailto:bluescreenwerner@gmail.com)

Since

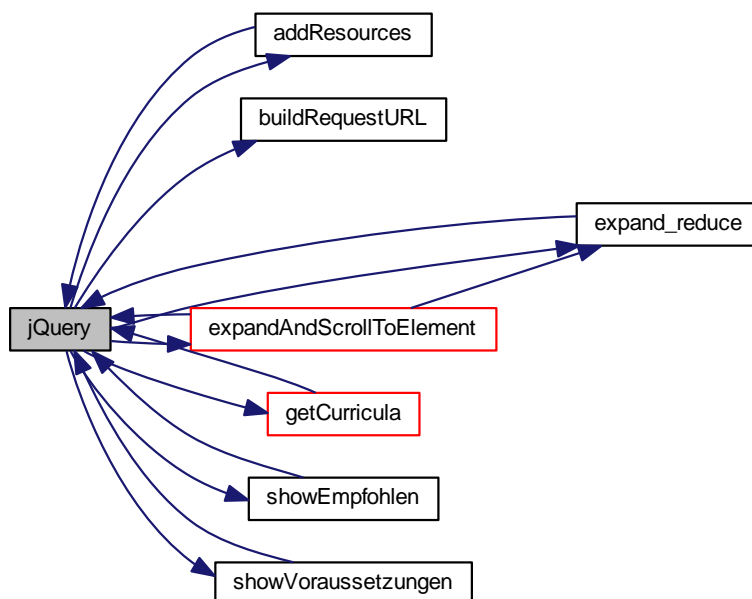
Commit [f90560a](#) on 2014-06-28

Definition at line 89 of file graph.js.

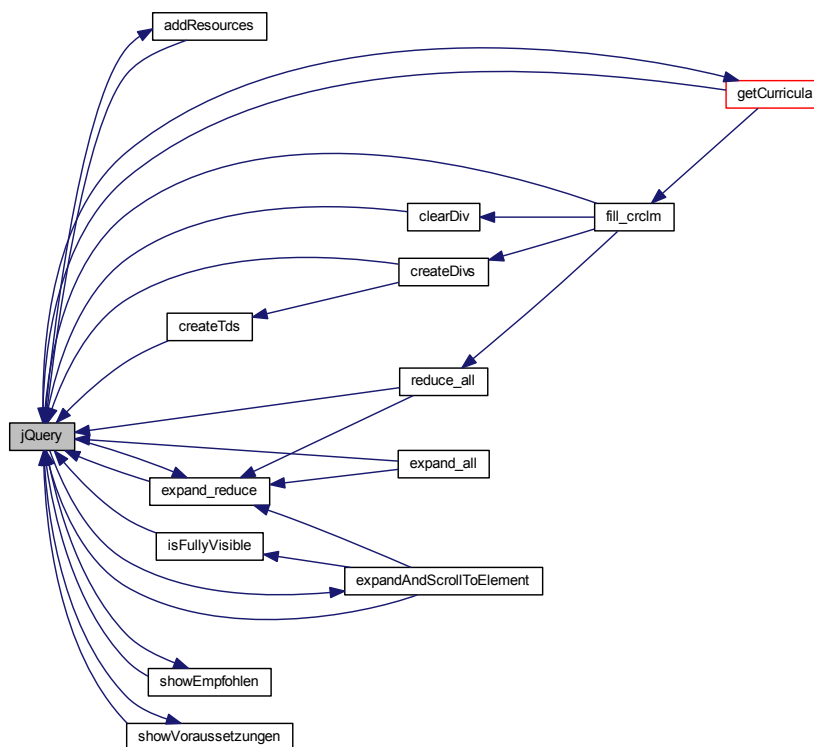
References `addResources()`, `buildRequestURL()`, `drupal_root`, `expand_reduce()`, `expandAndScrollToElement()`, `getCurricula()`, `showEmpfohlen()`, and `showVoraussetzungen()`.

Referenced by `addResources()`, `clearDiv()`, `createDivs()`, `createTds()`, `expand_all()`, `expand_reduce()`, `expandAndScrollToElement()`, `fill_crclm()`, `getCurricula()`, `isFullyVisible()`, `reduce_all()`, `showEmpfohlen()`, and `showVoraussetzungen()`.

Here is the call graph for this function:



Here is the caller graph for this function:



## 8.5.2.14 function reduce\_all ( )

Reduces all divs.

This procedure reduces all divs that are currently expanded.

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

Since

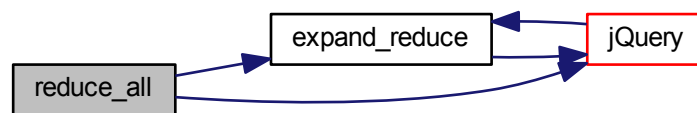
Commit [d831fad](#) on 2014-07-03

Definition at line 397 of file graph.js.

References `expand_reduce()`, and `jQuery()`.

Referenced by `fill_crclm()`.

Here is the call graph for this function:



Here is the caller graph for this function:



## 8.5.2.15 function showEmpfohlen ( element )

Shows or hides recommended courses.

This click handler shows or hides the list of recommended courses for a given course.

Parameters

element	The element to show the recommended courses for
---------	---

Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

## Authors

Markus Gutmayer - [m.gutmayer@gmail.com](mailto:m.gutmayer@gmail.com)  
Werner Breuer - [bluescreenwerner@gmail.com](mailto:bluescreenwerner@gmail.com)

## Since

Commit [3372f36](#) on 2014-06-29

Definition at line 256 of file graph.js.

References `jQuery()`, and `kurse`.

Referenced by `jQuery()`.

Here is the call graph for this function:



Here is the caller graph for this function:

8.5.2.16 function `showVoraussetzungen ( element )`

Shows or hides required courses.

This click handler shows or hides the list of required courses for a given course.

## Parameters

element	The element to show the required courses for
---------	--

## Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

## Authors

Markus Gutmayer - [m.gutmayer@gmail.com](mailto:m.gutmayer@gmail.com)  
Werner Breuer - [bluescreenwerner@gmail.com](mailto:bluescreenwerner@gmail.com)

Since

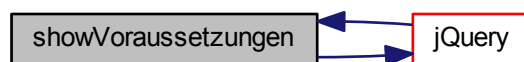
Commit [3372f36](#) on 2014-06-29

Definition at line 300 of file graph.js.

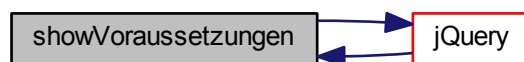
References `jQuery()`, and `kurse`.

Referenced by `jQuery()`.

Here is the call graph for this function:



Here is the caller graph for this function:



### 8.5.3 Variable Documentation

#### 8.5.3.1 `var drupal_root = ""`

Definition at line 75 of file graph.js.

Referenced by `addResources()`, `createTds()`, `expand_reduce()`, `getCurricula()`, and `jQuery()`.

#### 8.5.3.2 `var jsonCalls = []`

Definition at line 76 of file graph.js.

Referenced by `createTds()`, and `getCurricula()`.

#### 8.5.3.3 `var kurse = {}`

Definition at line 74 of file graph.js.

Referenced by `createDivs()`, `createTds()`, `fill_crclm()`, `fillMissingDetail()`, `showEmpfohlen()`, and `showVoraussetzungen()`.

## 8.6 Mainpage.dox File Reference

## 8.7 pdf\_creator.inc.php File Reference

PDF document generation from curricula data.

## Data Structures

- class [overviewPDF](#)  
Class for PDF document generation from curricula data.

## 8.7.1 Detailed Description

PDF document generation from curricula data.

This file contains all necessary functionality for automatically generating PDF documents from the imported curricula data.

## Author

Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)

## Authors

Fabian Puehringer - [f.puehringer@24speed.at](mailto:f.puehringer@24speed.at)

## Version

1.0.2 2014-07-22

## Since

Commit [b9342d9](#) on 2014-06-30

## See also

[overviewPDF](#)

Definition in file [pdf\\_creator.inc.php](#).

## 8.8 plugin.js File Reference

Registers the CKEditor plugin.

## Functions

- CKEDITOR.plugins.add('stukowin\_curriculum',{icons: 'stukowin\_curriculum', init: function(editor){editor.addCommand('stukowin\_curriculum\_Dialog', new CKEDITOR.dialogCommand('stukowin\_curriculum\_Dialog'));editor.ui.addButton('stukowin\_curriculum',{label: 'Insert Taxonomy', command: 'stukowin\_curriculum\_Dialog', toolbar: 'insert'});CKEDITOR.dialog.add('stukowin\_curriculum\_Dialog', this.path+ 'dialogs/stukowin\_curriculum.js');}})

## 8.8.1 Detailed Description

Registers the CKEditor plugin.

This file contains the commands for registering the CKEditor Plugin. It adds the button and the dialog box and adds the commands behind them.

## Authors

Werner Breuer - [bluescreenwerner@gmail.com](mailto:bluescreenwerner@gmail.com)  
Markus Gutmayer - [m.gutmayer@gmail.com](mailto:m.gutmayer@gmail.com)



## Version

1.0.0 2014-07-01

## Since

Commit [6f56770](#) on 2014-06-30Definition in file [plugin.js](#).

## 8.8.2 Function Documentation

8.8.2.1 CKEDITOR plugins add ( 'stukowin\_curriculum' , {icons: 'stukowin\_curriculum', init:function(editor){editor.addCommand('stukowin\_curriculum\_Dialog', new CKEDITOR.dialogCommand('stukowin\_curriculum\_Dialog'));editor.ui.addButton('stukowin\_curriculum',{label: 'Insert Taxonomy', command: 'stukowin\_curriculum\_Dialog', toolbar: 'insert'}});CKEDITOR.dialog.add('stukowin\_curriculum\_Dialog', this.path+ 'dialogs/stukowin\_curriculum.js')}} )

## 8.9 stukowin.install File Reference

Install script.

## Functions

- [stukowin\\_install \(\)](#)  
Implements hook\_install().
- [\\_stukowin\\_installed\\_taxonomy\\_fields \(\)](#)  
Contains the array of additional vocabulary fields.
- [\\_stukowin\\_installed\\_taxonomy\\_instances \(\)](#)  
Contains the array of additional fields for vocabulary instances.
- [\\_stukowin\\_installed\\_fields \(\)](#)  
Contains the array of additional fields for the stukowin content node type.
- [\\_stukowin\\_installed\\_instances \(\)](#)  
Contains the array of additional fields for the stukowin content node type.
- [\\_stukowin\\_relation\\_types \(\)](#)  
Contains custom relation types for recommendations and requirements.
- [\\_stukowin\\_create\\_relation\\_types \(\)](#)  
Creates the relation type.
- [stukowin\\_uninstall \(\)](#)  
Implements hook\_uninstall().

## 8.9.1 Detailed Description

Install script.

This file contains the Drupal install script for the stukowin module.

## Author

Konstantinos Dafalias - [kdafalias@gmail.com](mailto:kdafalias@gmail.com)

Version

1.0.0 2014-07-16

Since

Commit [d179abc](#) on 2014-06-28

Definition in file [stukowin.install](#).

## 8.10 stukowin.module File Reference

Main module file.

Functions

- [stukowin\\_help](#) (\$path, \$arg)  
Implements hook\_help() Displays help information about the module.
- [stukowin\\_admin](#) ()  
Menu callback for module settings ("admin/stukowin/settings")
- [stukowin\\_pdf\\_menu](#) (\$form, &\$form\_state)  
Menu callback for generating PDF documents ("admin/settings/stukowin/pdf")
- [stukowin\\_pdf\\_menu\\_submit](#) (\$form, &\$form\_state)  
Submit handler for [stukowin\\_pdf\\_menu\(\)](#)
- [stukowin\\_pre\\_retrieve](#) (\$form, &\$form\_state)  
Menu callback for import ("admin/settings/stukowin/import")
- [stukowin\\_pre\\_retrieve\\_submit](#) (\$form, &\$form\_state)  
Submit handler for [stukowin\\_pre\\_retrieve\(\)](#)
- [stukowin\\_get\\_crclm\\_taxonomy](#) (\$iVID)  
JSON service for the nested array of courses details for one curriculum.
- [stukowin\\_get\\_crclm\\_list](#) ()  
JSON service for a list of all currently published curricula.
- [stukowin\\_get\\_lva](#) (\$iNodeID)  
JSON service for the details of a single course.
- [stukowin\\_taxonomy\\_menu](#) (\$form, &\$form\_state)  
Menu callback for creating a new ITSV or specialisation vocabulary.
- [stukowin\\_taxonomy\\_menu\\_submit](#) (\$form, &\$form\_state)  
Submit handler for [stukowin\\_taxonomy\\_menu\(\)](#)
- [stukowin\\_menu](#) ()  
Implements hook\_menu().
- [stukowin\\_ckeditor\\_plugin](#) ()  
implements hook\_ckeditor\_plugin
- [stukowin\\_theme\\_registry\\_alter](#) (&\$theme\_registry)  
implements hook\_theme\_registry\_alter

### 8.10.1 Detailed Description

Main module file.

This file is the central hook for the Drupal module. All functions accessible by Drupal are located in this file.



```
'curriculum';taxonomyTypeSet=true;});if(dialog.getValueOf('currdialog', 'itsv')){if(curriculums)
curriculums+= ' ';curriculums+= 'itsv';taxonomyTypeSet=true;});if(dialog.getValueOf('currdialog',
'specialisation')){if(curriculums) curriculums+= ' ';curriculums+= 'specialisation';taxonomyTypeSet=
true;});if(!taxonomyTypeSet){alert('Error:Please select at least one taxonomy type to
display');return;}div.setAttribute('data-currtype', currType);div.setAttribute('data-curriculums',
curriculums);div.setAttribute('id','curriculum_display');var curr_div=new CKEDITOR.dom.
element('div');curr_div.setAttribute('id', 'curriculum_legende') curr_div.setStyle('padding-left',
'1.5em');var table=new CKEDITOR.dom.element('table');table.id="Legende";var row1=new CKEDITOR.dom.
element('tr');table.append(row1);var cell11=new CKEDITOR.dom.element('td');row1.append(cell11);var cell12=new CKEDITOR.dom.element('td');row1.append(cell12);var cell13=new CKEDITOR.dom.element('td');row1.append(cell13);var cell14=new CKEDITOR.dom.element('td');row1.append(cell14);var row2=new CKEDITOR.dom.element('tr');table.append(row2);var cell21=new CKEDITOR.dom.element('td');row2.append(cell21);var cell22=new CKEDITOR.dom.element('td');row2.append(cell22);var cell31=new CKEDITOR.dom.element('td');row2.append(cell31);var cell32=new CKEDITOR.dom.element('td');row2.append(cell32);var cell23=new CKEDITOR.dom.element('td');row1.append(cell23);var cell24=new CKEDITOR.dom.element('td');row1.append(cell24);var cell33=new CKEDITOR.dom.element('td');row2.append(cell33);var cell34=new CKEDITOR.dom.element('td');row2.append(cell34);var plusIcon=new CKEDITOR.dom.element('img');plusIcon.setAttribute('src', drupal_root+"sites/all/modules/stukowin/images/Plus.png");plusIcon.setStyle('width', '3em');plusIcon.setStyle('height', '3em');var minusIcon=new CKEDITOR.dom.element('img');minusIcon.setAttribute('src', drupal_root+"sites/all/modules/stukowin/images/Minus.png");minusIcon.setStyle('width', '3em');minusIcon.setStyle('height', '3em');var vorIcon=new CKEDITOR.dom.element('img');vorIcon.setAttribute('src', drupal_root+"sites/all/modules/stukowin/images/Voraussetzung.png");vorIcon.setStyle('width', '3em');vorIcon.setStyle('height', '3em');var empfIcon=new CKEDITOR.dom.element('img');empfIcon.setAttribute('src', drupal_root+"sites/all/modules/stukowin/Empfohlen.png");empfIcon.setStyle('width', '3em');empfIcon.setStyle('height', '3em');var ectsIcon=new CKEDITOR.dom.element('img');ectsIcon.setAttribute('src', drupal_root+"sites/all/modules/stukowin/ECTS.png");ectsIcon.setStyle('width', '3em');ectsIcon.setStyle('height', '3em');var volIcon=new CKEDITOR.dom.element('img');volIcon.setAttribute('src', drupal_root+"sites/all/modules/stukowin/images/V300.png");volIcon.setStyle('width', '3em');volIcon.setStyle('height', '3em');cell11.append(plusIcon);cell12.appendText("Aufklappen");cell13.append(empfIcon);cell14.appendText("Empfohlene Voraussetzungen anzeigen");cell21.append(minusIcon);cell22.appendText("Zuklappen");cell23.append(ectsIcon);cell24.appendText("ECTS");cell31.append(vorIcon);cell32.appendText("Verpflichtende Voraussetzungen anzeigen");cell33.append(volIcon);cell34.appendText("LVA-Typ");div.append(curr_div);curr_div.append(table);editor.insertElement(div);}}}
```

### 8.11.1 Detailed Description

The stukowin\_curriculum dialog definition.

This file contains the dialog definition for our CKEditor plugin. It is called once a user clicks on the button in the CKEditor's menu bar.

#### Remarks

For this plugin to work, it has to be enabled in the CKEditor configuration.

#### Authors

Werner Breuer - [bluescreenwerner@gmail.com](mailto:bluescreenwerner@gmail.com)  
 Markus Gutmayer - [m.gutmayer@gmail.com](mailto:m.gutmayer@gmail.com)  
 Jakob Strasser - [jakob.strasser@telenet.be](mailto:jakob.strasser@telenet.be)  
 Fabian Puehringer - [f.puehringer@24speed.at](mailto:f.puehringer@24speed.at)

#### Version

1.0.0 2014-07-01

Since

Commit [6f56770](#) on 2014-06-30

Definition in file [stukowin\\_curriculum.js](#).

### 8.11.2 Function Documentation

```

8.11.2.1 CKEDITOR dialog add ( 'stukowin_curriculum_Dialog' , function(editor){return{title:
'Insert a Curriculum View', minWidth:400, minHeight:200, contents:[{id: 'currdialog',
elements:[{type: 'radio', id: 'currtype', label: 'Select the curricula type you want
to display:', items:[['Bachelor', 'Bachelorstudium'], ['Master', 'Masterstudium']],
'default': 'Bachelorstudium'}},{type: 'fieldset', label: 'Taxonomy types to display',
children:[{type: 'vbox', padding:0, children:[{type: 'checkbox', id: 'normal', label: 'Normal',
'default': 'checked'}},{type: 'checkbox', id: 'itsv', label: 'ITSV'}},{type: 'checkbox',
id: 'specialisation', label: 'Specialisation'}]]}], onOk:function(){var dialog=this;var
drupal_root=Drupal.settings.basePath;var div=editor.document.createElement('div');var
currType=dialog.getValueOf('currdialog', 'currtype');var taxonomyTypeSet=false;var

```