

Moodle at EPFL

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Chapter 1

Moodle at EPFL

1.1 Foreword

According to the guidelines defined in EPFL's eLearning strategy¹, we do not enforce the use of one particular Learning Management System (LMS). Nevertheless, in order to grant easy access to basic eLearning tools to a large number of teachers, Moodle was progressively introduced at EPFL since the summer semester 2005. The deployment of Moodle at EPFL is still in a growing phase: it is currently hosting over 200 courses, with an average of 1000 visits per day. We expect this number to increase during the coming years.

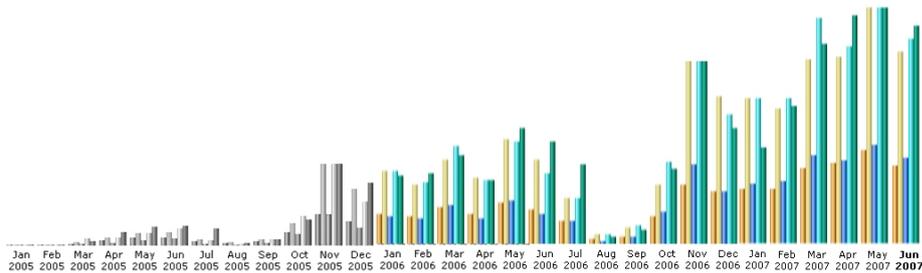


Figure 1.1: Visits to <http://moodle.epfl.ch/>. The top month since the introduction of Moodle at EPFL was May 2007 (32609 visits).

1.2 Course creation

To get your course online, simply write an email to housekeeper.moodle@epfl.ch (this address is an alias for Patrick.Jermann@epfl.ch and David.Brechet@epfl.ch) by specifying a title, the list of teachers (and assistants) and your preferred course format (topic, weekly, social, project based).

- The *topic* format resembles the structure of a book where one section corresponds to one topic of the course.

¹<http://craftwww.epfl.ch/learntech/docs/StrategieTechnologiesFormation-14-111.pdf>

- The *weekly* format resembles the structure of a calendar where one section corresponds to one week of the course.
- The *social* format simply consists of a single discussion forum without content sections.
- The *project* format is similar to the topics and weekly formats, but allows teachers to define arbitrary durations for the sections (called project phases in this context). A simple gantt chart, showing project phases and deliverables is automatically displayed at the top of the course (see details on page 28).

1.3 Login

Login for Moodle at EPFL is based on Tequila², the identity management system used (and developed) in our institution. Among other things, it will allow for a single sign-on authentication, meaning that once you logged in for one of EPFL's administrative services, you don't have to retype your password to access other services.

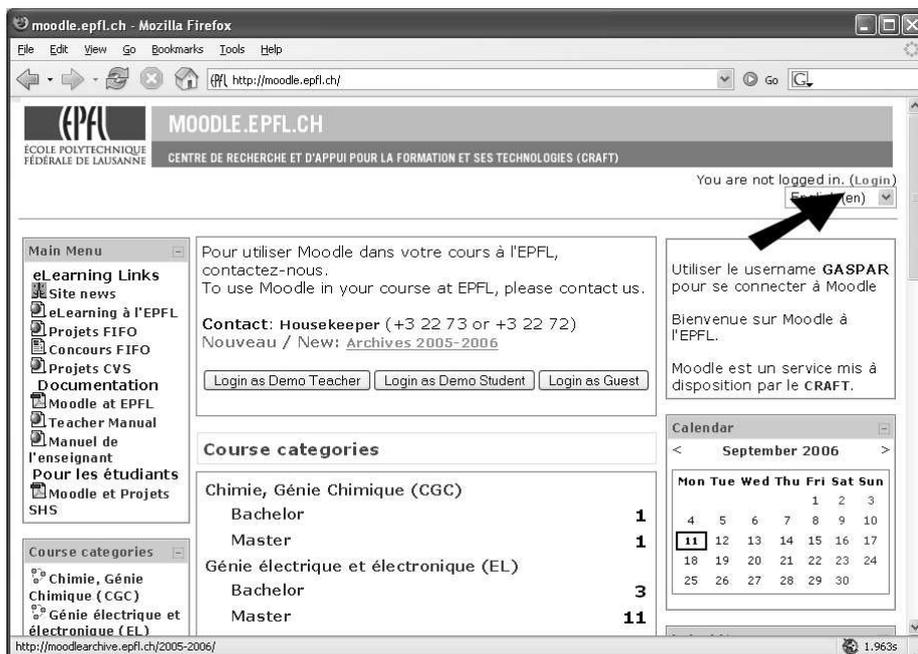


Figure 1.2: The main page from <http://moodle.epfl.ch/>. The login link is located in the upper right corner of the window.

²<http://tequila.epfl.ch>

EPFL members

Use your *GASPAR* username and password to login to Moodle. If you don't know what your username is, go to: <http://www.epfl.ch/cgi-bin/csoldap>, and search for yourself. Your username is printed in the query result under 'Username'.

Members from outside EPFL

Members from Swiss universities

Members from Swiss universities can be authenticated via the AAI Authentication and Authorization Infrastructure³ provided by Switch to the institutions of higher education in Switzerland. Students from other Swiss universities simply choose their institution from a pull-down menu (See 1.3) and use the account from their home institution to login to Moodle.

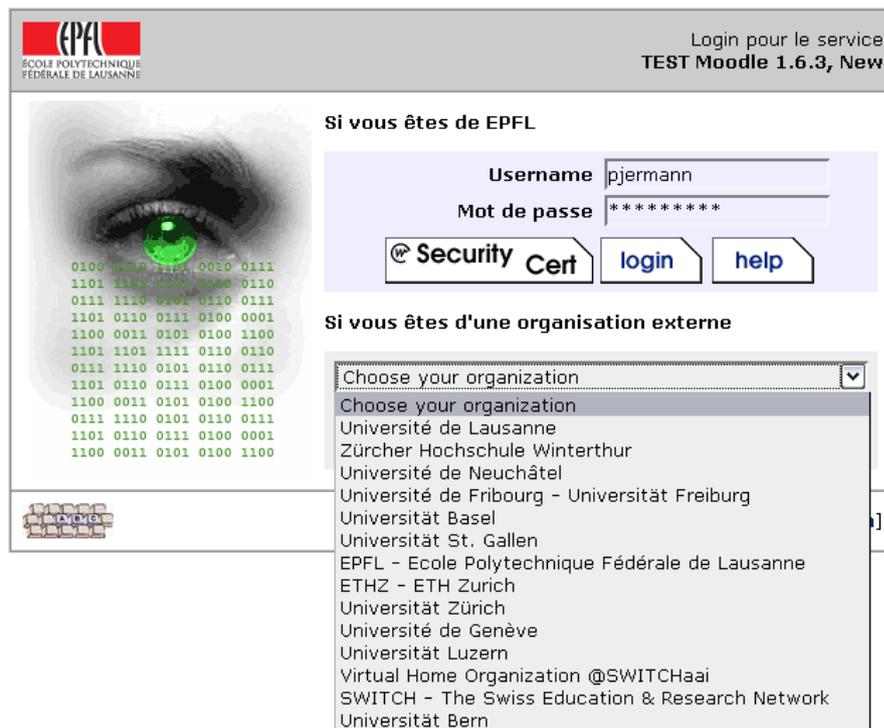


Figure 1.3: The login screen allows users from outside EPFL to select their home institution during login.

³ <http://www.switch.ch/aai/>

Guests from elsewhere

EPFL-Guest accounts can be created for external students and teachers who participate in a course at EPFL. To create guests by yourself, use the service provided at <https://guests.epfl.ch>. Guests can also create an account by themselves. People who have an EPFL-Guest account automatically have access to Moodle and can act as a regular EPFL member.

If you want to create accounts for a large number of students from an external institution, write to housekeeper.moodle@epfl.ch to arrange for a solution.

Demonstration Courses

Several demonstration courses are available: a topic based course⁴, a project-based course⁵.

Demonstration accounts

You can test the teacher and student roles in Moodle by clicking on the corresponding link on the Moodle main page (<http://moodle.epfl.ch/>).

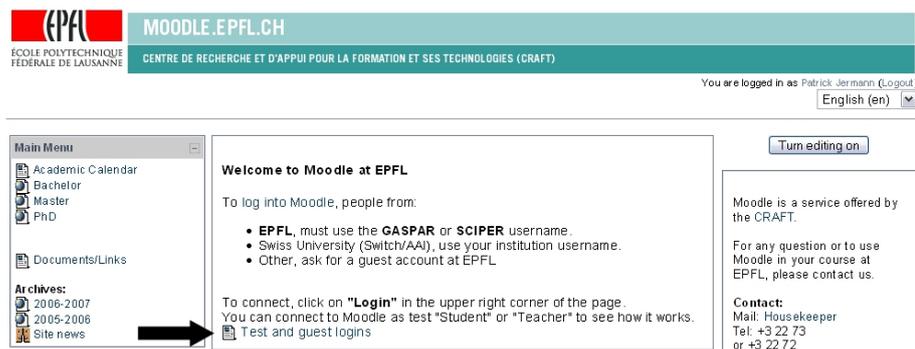


Figure 1.4: Click on the link to login as a teacher or a student.

⁴<http://moodle.epfl.ch/course/view.php?id=8>

⁵<http://moodle.epfl.ch/course/view.php?id=12>

Chapter 2

Frequent Administration Tasks

Many parameters can be set to control the behavior of your online course. We do not want to explain all of them here, as many parameters come with meaningful default values (Details are available at Moodle’s online documentation¹). Hence, we only cover the basic and most important topics here. To access the settings of your course, click on the ‘Settings’ link in the ‘Administration’ box as illustrated in Figure 2.1.

2.1 Who has access to the course ?

Controlling access to the course is somewhat complex and may be tricky for beginners. The settings that affect access are available from the Administration Block (follow the “Settings” link).

There are two categories of users:

- people who have a Moodle account (this includes EPFL members, members of Swiss Universities as well as people who have an EPFL-Guests account as defined with <http://guests.epfl.ch/>)
- guests (all the others, including for instance Google’s robot which indexes websites). Opening a course to guests does not mean that you can’t hide copyrighted material (see Section 3.1 on page 16 for details).

There are two levels of access to a course:

- Being allowed to *look at the course*. The person can access the course’s page and look at the resources, read the forum posts.
- Being *enrolled in the course*. In addition to simply accessing the resources, the person can participate to the course’s activities, for example post in the forum discussions, turn in assignments, etc. The possibility to enrol into a course is reserved to people who have a Moodle account (and who know the enrolment key)

¹http://docs.moodle.org/en/Course_settings



Figure 2.1: The Administration block appears on the left side of the screen. Follow the ‘Settings’ link to fine tune the settings of your course.

Enrolment key

The enrolment key is a “course” password that allows guests or people with a Moodle account to sign-up to the course.

- *EMPTY* Enrolment Key. Any user who has a Moodle account (EPFL members and EPFL-Guests) can sign-up to your course. If you set Guest Access to “without the key” (see paragraph below), even guests can sign-up to your course.
- *FILLED* Enrolment Key. Restricts access to the course to the people who know the key. You typically announce the key during the first class. Users have to type the key only once, when first enter the course.

Guest access

Three possibilities exist concerning guest access. Remember that guests have ‘read-only’ access to your course and can only access the resources, and read forum messages. Guests can neither submit assignments, nor can they participate to quizzes.

- *without the key*. Anybody, even without a Moodle account can access your course. Use this setting if you want to share your Moodle course with everybody. With this setting, Google and other search engines will

be able to enter your course and index its content. It is however possible to hide copyrighted material even with this setting (See Section 3.1 on page 16).

- *with the key.* Guests can access the course, given that they have the enrolment key. See the comments about the “Enrolment key” above.
- *no.* Only people who have a local Moodle account can access the course.

IS-Academia ID number

Based on a special ID number, we can allow students who registered for the course through IS-Academia to enter the course without typing the enrolment key. Ask housekeeper.moodle@epfl.ch to fill in the ID number. See more details about this functionality on page 33.

Hiding the course

The course can be hidden from students during the preparation phase. The “Availability” parameter lets you choose between:

- *This course is available to students.* Students can see and enroll to the course.
- *This course is not available to students.* The course is hidden to the students, which means that only teachers can see and access it.

2.2 How can I add an invited student by hand ?

1. Follow the “Assign roles” link in the Administration Block.
2. Select the “Students” (or Etudiants) in the list of available roles (see figure 2.2).
3. Select the students you want to add from the list of potential students (on the right side in figure 2.3)
4. Use the arrows to move them to the list of enrolled students (on the left side in figure 2.3).
5. If the students do not appear in the list of potential students, it is very likely that they never logged in. Hence, you have to ask the person to login to Moodle a first time (see “Login” section on page 1.2).

2.3 How can I add teachers ?

Teachers have special privileges in a course. They can edit the content of the course, add and remove resources, distribute grades and feedback, etc. Here is how you can select additional teachers (assistants, invited speakers, etc.) who have access to your course:

1. Open the “Assign roles” link from the Administration Block.

Assign roles ?

Roles	Description	Users
Enseignant	Les enseignants peuvent tout faire dans un cours, y compris ajouter et modifier les activités et donner des notes aux étudiants.	1
Enseignant non éditeur	Les enseignants non éditeurs peuvent enseigner dans leur cours et donner des notes aux étudiants, mais ne peuvent ni ajouter, ni modifier des activités.	0
Étudiant	Les étudiants ont en général moins de privilèges dans un cours.	0
Invité	Les invités ont très peu de privilèges et ne peuvent normalement saisir de texte à aucun endroit.	0

Figure 2.2: This screen shows the roles that you are allowed to assign.

2. Select the “Teacher” link from the list of available roles.
3. Select or search for the teachers you want to add from the list of potential teachers (on the right side) in figure ??)
4. If the person you are looking for does not appear in the list, it is very likely that they never logged in. Hence, you have to ask the person to login to Moodle a first time (see “Login” section on page 1.2).

2.4 How can I login as a student ?

It is possible to switch roles and to see what students or guests will see when they visit your course. To switch to another role, select the role from the pull-down menu top right side of the page. The special role should now be printed next to your name on the top right side of the page. To switch back, click on “Return to my normal role”.

It is also possible to login as one particular student, e.g. if you want to test whether he or she has access to a particular group feature.

1. open the list of participants from the ‘People’ block.
2. click on one of the students names which are listed.
3. from the profile of the user, click on the button labeled ‘Login as’
4. have a look at your course . . .
5. to switch back to your real self, click on your name on the top right of the page.

2.5 How can I create groups ?

Groups are useful mainly for assignments and forums. Assignments can be configured to take groups into account, i.e. when a member of a group submits a file, it is copied automatically to all group members. Similarly, when the teacher provides feedback, the grades and comments are given to all members of

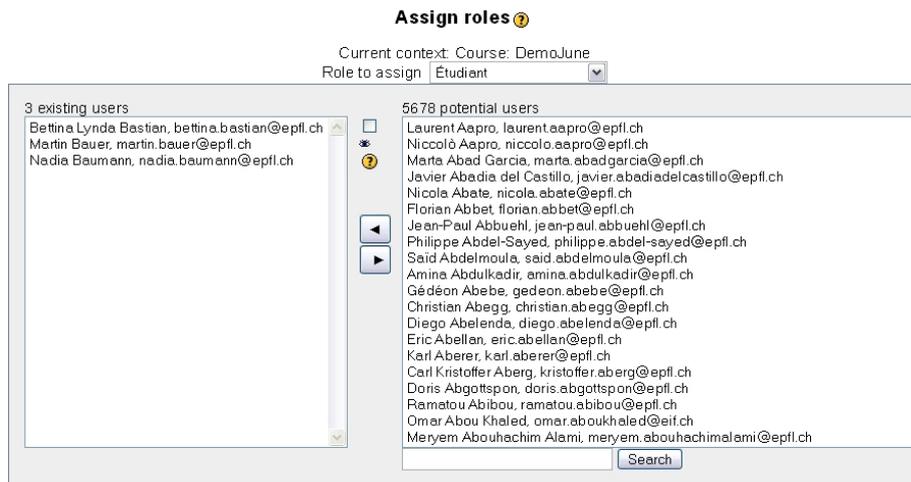


Figure 2.3: This configuration screen shows side by side, all students who are enrolled to your course (on the left side) and the potential new students (on the right side)

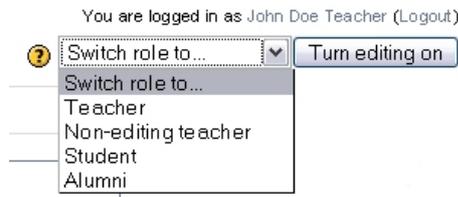


Figure 2.4: Select the role you want to switch to from the pull-down menu on the upper right side of the screen.

the group. Forums implement the group mode by creating separate discussions, one for each group.

Groups of students and teachers can be defined by following the ‘Group’ link in the Administration Block. Group creation follows two steps:

1. Create the group by providing a name and clicking the ‘Create group’ button.
2. In the group edition form that appears, choose a name and a description for the group.
3. Set options: you can also upload a picture which will represent the group. The group enrolment key allows students to a) enter the course and b) be assigned to that particular group in only one operation. This is useful only if groups are defined before the course starts.
4. Click on “Add/remove users”

5. Select students and/or teachers from the left list, as well as one group from the central list. When you are done, click on the “Back to groups” button.

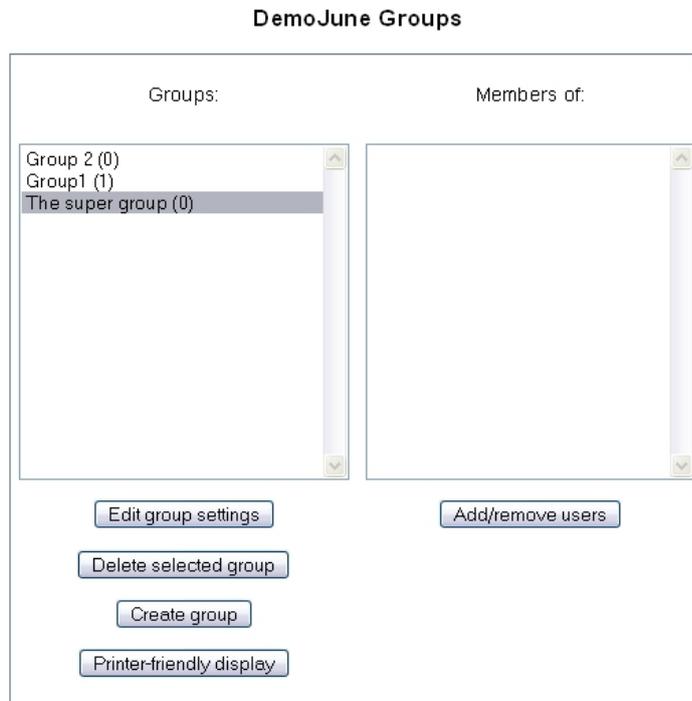


Figure 2.5: Group creation interface

It is also possible to auto-create groups by either specifying the size of the groups, or the number of groups. The naming scheme determines the naming policy for the groups. Specifying a @ will result in groups being labeled from A through Z. Specifying a # will result in groups being numbered from 1 to n.

Add/remove users The super group (8)

Existing members: 8

- Carl Kristoffer Aberg
- Christian Abegg
- Diego Abelenda
- Donato Acquaviva
- Doris Abgottspon
- Eric Abellan
- François-Xavier Aeberhard
- Grégoire Abplanalp

◀

▶

Potential members: 37

- # Moodle Administrator
- # Tom Bombadilom
- Amrina Abdulkadir
- Antonin Addor
- Baptiste Adam
- Catharina Adelöw
- Christian Adamczyk
- Florian Abbet
- Gédéon Abebe
- Giovanni Accardo
- Guest User
- Javier Abadia del Castillo
- Jean-Paul Abbuehl
- Jugoslava Acimovic
- Karim Achouri
- Karl Aberer
- Laurent Aapro
- Marc Aboussouan
- Marek Adamczyk
- Marta Abad Garcia

[Back to groups](#)

Figure 2.6: Group creation interface, selecting members of a group.

Auto-create groups

Auto-create groups * Hide Advanced

Select members from role: All

Specify: Number of groups

Group/member count*: 3

Prevent last small group*

Allocate members* Randomly

Naming scheme* Group @

Preview
Submit
Cancel

There are required fields in this form marked*.

Figure 2.7: Group auto-creation.

Chapter 3

Resources

3.1 How to use resources ?

Contrary to many Content Management Systems, Moodle's primary purpose is not to create and deliver an online book, but rather to serve as a repository for resources and a central place for activities. While Moodle allows for content to be directly composed online (as text or HTML), we recommend to use Moodle as a way to distribute textbooks, articles, source code and powerpoint slides in their original format.

Of course, we also encourage you to use tools in Moodle which allow students to produce content, for instance, the assignment, the database or the wiki modules. Don't hesitate to contact us¹ for more information about these modules.

Several types of resources can be created inside or distributed with Moodle. See Moodle's documentation² and Moodle's manual³ for details.

Files and resources

The term 'resource' is used to refer to electronic material which is accompanied by a title and a description. For example, a word document called schedule.doc accompanied by a title like 'Course Schedule' and a description like 'This file contains the schedule for the lecture and practical work sessions'. When resources are added to the sections (the boxes) of a course they appear with their title rather than with their filename. Students can display a list of all resources in the course. It is therefore important to provide meaningful titles and descriptions to ensure that students quickly identify the material at their disposal.

Files and directories

If you plan to upload many files (exercices, corrections, papers, etc.) we recommend that you organize them in directories by using the file manager which is

¹housekeeper.moodle@epfl.ch, a.k.a. Patrick.Jermann@epfl.ch and David.Brechet@epfl.ch

²<http://docs.moodle.org/en/Resources>

³http://download.moodle.org/docs/using_moodle/ch3_content.pdf

available in the ‘Administration Block’ (click on ‘Files’). Directories can be displayed as resources, with a title and a description (for example a resource called ‘Mandatory Readings’ that points to a directory called ‘mandatory_readings’).

From the Moodle Documentation⁴:

Whilst uploading is restricted to one file at a time you can upload a zip containing many files. Once uploaded Moodle will recognise the file as a zip and show on unzip link. You can then follow the unzip link which will extract the file(s) within.

HTML and text files can be edited in-place online. Other files will need to be edited on your local computer and uploaded again. If you upload a file with the same name as an existing file it will automatically be overwritten.

You can also create a directory and display the whole contents of that directory using the setting in the add resource drop down in a course section.

3.2 Copyrighted material

When a Moodle course is open to guests, Moodle makes all resources available to them without restriction (the guests however cannot participate in activities, and of course, cannot modify the course).

Some teachers at EPFL wanted to make their course available to a large audience while at the same time distributing some copyrighted resources to their enrolled students only. We started from a hack⁵ to implement our own restricted resource.

A working example can be found online at the Restricted Resource Demo Course⁶. The resource is visible for regular students and users who have a login, but it is invisible for guests.

Configuration

From the Resources pull-down menu, choose “Link to a file or website”. On the Resource configuration screen, simply check the box next to “hide this resource for guests”.



Hide this resource for guests

⁴<http://docs.moodle.org/en/Files>

⁵<http://moodle.org/mod/forum/discuss.php?d=16264#83186>

⁶<http://moodle.epfl.ch/course/view.php?id=39>

Chapter 4

Assignments

4.1 When and how to use assignments ?

Moodle's assignment module is useful to collect students' exercises, collect deliverables in project based courses, collect reports and other documents produced by the students for an exam. Beyond the simple collection of files, the "assignments" module is used to assign grades and provide feedback to the students.

Assignments are added by using the "Add an Activity ..." pull-down menu inside the sections of the course.

It is quite common in higher education to have groups of students work together on projects, or exercises. Hence, we needed a way to set up group assignments, i.e. one user uploads the file but all the members of his or her group "benefit" from the submission. Also, for the teacher we wanted to allow for group grading, i.e. assign the grade and give feedback only once for all the students in a group. All three assignment types on Moodle at EPFL can be carried out by individuals or groups.

- Offline activity. This is useful when the assignment is performed outside of Moodle. It could be an activity elsewhere on the web or for instance students turning in a paper version of a blueprint. Students can see a description of the assignment, but can't upload files or anything. Grading works normally, and students will get notifications of their grades.
- Online text. This assignment type asks users to edit a text, using web-based editing tools (the same editor that you use when describing topics of the course). Teachers can grade them online, and even add inline comments or changes. (If you are familiar with older versions of Moodle, this Assignment type does the same thing as the old Journal module used to do.)
- Upload a single file. This type of assignment allows each participant (or group) to upload a single file, of any type. This might be a Word processor document, or an image, a zipped web site, or anything you ask them to submit.
- Advanced uploading of files. This custom development from CRAFT offers the following possibilities:

- It is possible for individuals or groups to submit a response to an assignment.
- A teacher can assign individual or group grades.
- Feedback can be provided either as a short text comment or by uploading a file (possibly the annotated/modified original submission)
- Students can submit several files as a response to the assignment
- Teachers optionally can specify how many files have to be submitted, as well as the filenames that have to be submitted.

4.1.1 Defining what you expect

Especially if you have many students enrolled in your class, it is important to define the assignments as clearly as possible. This will save you a lot of time-consuming manipulations when grading the submissions. In a nutshell, you should make sure that you can quickly find the needed files (only the required files should be submitted) and open them easily (the files should be in the correct format). Provide a description of what is expected from the students including:

- *how many files* should be submitted. If students work on a programming exercise it is easier to ask for a single file archive (tar or zip) rather than a long list of files. Correction and upload are simpler when the archive can be uploaded and uncompressed in one click. On the other hand, if the assignment includes clearly identifiable components, e.g. theoretical review (word) and a data sheet (excel), it might be easier to ask for different files, because one could directly click on different theoretical reviews from the gradebook in order to compare them for grading.
- whether you want to *force filenames*. When students submit several files, they will choose their own naming conventions. The same file will be named “introduc1.doc” by one student and “Introduction théorique” (without file extension) by another. If you want to quickly identify which file corresponds to each part of the assignment, we recommend that you either state explicitly what filenames you expect in the description of the assignment, or be more strict by configuring the list of filenames that are accepted. Following the latter possibility, Moodle will refuse files that do not conform to the rules that you set up (See page 17).
- what *file format* is required. State whether you want word (.doc), open office (.sdw), .tex, .pdf, .java, .m or .c source files. This will avoid time consuming conversions on your side.
- what *criteria for grading* will be used. One of the pitfalls with assignments is that students do more (or something else) than what is expected from them. This might be a indicator for high motivation, but can also lead students to feel that too much is required from them. Be as specific as possible with regard to the problem that has to be solved, and about the relative importance of say, mathematical soundness and stylistic matters.

4.1.2 Providing feedback

- Provide a *short comment* in addition to numeric grades. Grades alone might be sufficient for simple assignments, but some explanations and

hints are needed if you expect the students to learn from their errors. Simply getting a grade of 45/60 for a 5 page long document does not allow students to identify areas for improvement.

- Text processing programs like MS Word or the Acrobat PDF file format allow for *annotations to be made directly in the file*. This is a convenient way to provide detailed feedback. The annotated file can be uploaded as a feedback for the student(s). To use this possibility the option “Attach a review file” has to be set to “Yes”.

4.2 Configuration

This section describes the specificities of the “Advanced uploading of files” module in Moodle. This module rassembles the features from the group assignment (a group of students submits the assignment), the multifile assignment (the possibility to submit several files) and the review assignment (the possibility for a teacher to upload a file for feedback).

Assignments are added by using the “Add an Activity ...” pull-down menu inside the sections of the course. Choose “Advanced uploading of files” from this menu. The form that is displayed upon creation of an assignment allows to define the settings.

4.2.1 General Settings

First of all, you need to clearly tell your students what you expect from them. Provide a name (e.g. Java class for stepper motor) and describe the details of the assignment by including the goal (e.g. write a Java class to control a stepper motor, submit the .java file and not the .class), references to useful resources (e.g. use Eclipse, start with the templates that can be downloaded from Moodle), the criteria for grading (e.g. the program has to pass the test suite for motors) and the number of points that can be earned with the exercise (e.g. this exercise counts for 5 percents of the final grade).

Grade

With the ‘Grade’ pulldown menu you can choose whether you want to assign a grade. If you do not want to grade the assignment, choose ‘No grade’. If you decide to grade the assignment, choose the maximum number of points (0-100) that can be earned. If you want to use marks from 0 to 6, you can either choose 6 as the maximum (the grading interface will propose grades 0, 1, 2, 3, 4, 5 and 6), or 60 which allows you to set marks with a tenth of a point precision. The grades given for all the assignments in the course can later be combined and modified to compute a final grade (e.g. $[0.7 * \text{final exam} + 0.3 * \text{exercises}] = \text{final grade}$).

Dates

Two dates can be set for an assignment:

- The ‘Available from’ date allows to prevent early submissions by the students. We usually do not use this setting because it’s ok for students to work at their own pace. Setting a date for this parameter would simply hide the possibility to upload a file or compose an online text before the given date.
- The ‘Due date’ is used to set the deadline for the assignment. It can either be a sharp deadline (if you choose ‘Yes’ for the ‘Prevent late submission’ option) which prevents any further submission, or you can tolerate some delay (choosing ‘No’).

Group mode

The group mode (No groups, Separate groups, Visible groups) set whether the activity is done by individuals or groups. If you want groups of students to select “Separate groups” or “Visible groups”. The difference between separate and visible groups is marginal and affects the presentation of grades in the grading book for the teachers.

The groups used for submission and grading rely on the groups defined in the course (more information about groups in Moodle can be found in the Moodle Teacher’s Manual¹ or the french Manuel de l’enseignant²):

When setting up the assignment, the teacher can choose whether to grade groups (all students in a group get the same grade and feedback) or to grade individuals (allows to give different grades and feedback to the members of a group).

Student visibility

Assignments, as any other module, can be hidden from students. Simply choose ‘Show’ or ‘Hide’ in the corresponding pulldown menu to set visibility. Assignments may for instance be hidden because their description is not up to date, or after the due date because the teacher does not want to leave the description available to the students.

Email alert to teachers

If enabled, then teachers are alerted with a short email whenever students add or update an assignment submission. Only teachers who are able to grade the particular submission are notified. So, for example, if the course uses separate groups, then teachers restricted to particular groups won’t receive any notices about students in other groups. For offline activities, of course, mail is never sent since students never submit anything.

¹<http://moodle.org/mod/resource/view.php?id=3968>

²<http://moodle.org/mod/resource/view.php?id=2812>

Adding a new Assignment to topic 1 ?

General

Assignment name*

Description* ?

Trebuchet | 1 (8 pt) | Lang | **B** | *I* | U | ~~S~~ | x_2 | x^2 | |

Path:

Grade ? 100

Available from 5 | September | 2007 | 07 | 25 | Disable

Due date 12 | September | 2007 | 07 | 25 | Disable

Prevent late submissions No

Advanced uploading of files

Grading Style ? Grade group

Force to Required Files ? No

Maximum size 2MB

Allow deleting ? Yes

Maximum number of uploaded files ? 3

Allow notes ? No

Hide description before available date ? No

Email alerts to teachers ? No

Common module settings

Group mode ? No groups

Visible Show

Figure 4.1: Settings for the assignment.

Chapter 5

Forums

5.1 When to use forums ?

Forums often stay empty, students don't post questions and teachers don't answer. This is due among others to: the lack of incentives ("posting won't give me a better grade"), the lack of time (it takes a lot of time to produce a good written answers), the lower cost of other communication channels ("I can ask the teacher at the end of the course", "I talk about the course with my colleagues at the cafeteria").

However, there are scenarios where forums work well! (See also the corresponding documentation at Moodle's main site: (http://docs.moodle.org/en/Forum_module)).

Default Forum: Administrative notifications

Each course comes with a forum in the first section of the course. This forum allows only teachers to post messages to announce administrative information to the students.

- Email forwarding makes sure everyone gets the information (make sure that you "force everyone to be subscribed")
- Keeps a trace of past announcements in the forum.
- Students might reply to state their opinion, for instance when discussing a meeting date, or a change in the agenda.

Note that a simple system like (Doodle)¹ is best suited for finding common meeting dates with many people.

User Created Forums

In addition to the default forum, teachers can create as many forums as they like inside the course.

¹<http://www.doodle.ch/>

Group coordination and file exchange

In project based courses, forums can be used by the members of a group to coordinate work (especially if the students don't meet daily) and share intermediary results. In some instances, the teacher can use the forum to publish students' responses to an assignment in the order to make them available to everyone.

- Files can be attached to posts
- Forums can be configured to separate different groups' discussions.
- Posts to the forum are forwarded as email to the participants. This ensures that everyone gets the information while at the same time keeping a trace of the exchanges.

Reading Seminar

Face to face discussions during a seminar-based course can benefit from a discussion forum. As an example, every week during our doctoral course "distributed cognitive systems" (Pierre Dillenbourg, Patrick Jermann, CRAFT) one student presented a paper from the reading list to the rest of the class. The rest of the class had to post a question about this paper three days in advance to the course forum. The final deliverable for the course was a conference-like paper that reported results from an experimental study.

- Presenters can use the questions posted in the forum to prepare their presentation.
- The questions are used by the teachers to guide the face to face discussion that follows the presentation.
- Posting a question requires that students read the paper even if they don't have to present it.
- The questions posted directly reflect active participation to the course. Questions could be graded and be part of the final grade.
- Posts to the forum are useful for the final report.

Experience based course

Posts to discussion forums can be used as an assignment. In a course that builds on reflection and sharing of personal experience, the forum can be used as the main sharing medium. The doctoral course "tutoring skills" (Nadine Stainier, CRAFT) is a good example thereof.

- Every week, the assignment is to post a message that describes one aspect of students' experience.
- The teacher provides written feedback and encouragements for contributions.
- The posts to the forum are used towards writing up a report.

5.2 General guidelines

Forums need a lot of attention in order to be successfully used in a course. Simple advice includes:

- use the forum instead of email to communicate with the students. This will keep a trace of discussions available to everyone and will ensure that Moodle is the main communication channel between you and the students.
- answer questions on a regular basis and tell the students what the time-frame is to get responses to their questions (e.g. 24 or 48 hours).
- some moderation is needed when a forum is used as a tool for open discussions (e.g. “what are the advantages and pitfalls of method X”).
- make the postings mandatory, or useful for the exam: e.g. define postings to the forum as an assignment to get extra credit, tell the students that they can use their postings as a resource for the exam.

See page 24 for details about settings related to the forum.

5.3 Configuration

In the settings for the forum (enter the Forum and click the “Update this forum” button on the upper right side) you can choose several options that affect the way the Forum works:

Forum type

You can choose among four types of forums (quote from the Moodle documentation):

A standard forum for general use is probably most useful for large discussions that you intend to monitor/guide or for social forums that are student led. This does not mean that you need to make a new posting for each reply in each topic although, in order to ensure that discussion does not get ‘out of control’, you may need to be prepared to spend a significant amount of time finding the common threads amongst the various discussions and weaving them together. Providing overall remarks for particular topics can also be a key aspect of your responsibilities in the discussion. Alternatively, you could ask students to summarize discussion topics at agreed points, once a week or when a thread comes to an agreed conclusion. Such a learner-centred approach may be particularly useful once the online community has been established and, perhaps, when you have modeled the summarizing process.

A single simple discussion is most useful for short/time-limited discussion on a single subject or topic. This kind of forum is very productive if you are interested in keeping students focused on a particular issue.

Each person posts one discussion is most useful when you want to achieve a happy medium between a large discussion and a short

and focused discussion. A single discussion topic per person allows students a little more freedom than a single discussion forum, but not as much as a standard forum where each student can create as many topics as they wish. Successful forums of this selection can be active, yet focused, as students are not limited in the number of times they can respond to others within threads.

A *Q and A forum* is best used when you have a particular question that you wish to have answered. In a Q and A forum, tutors post the question and students respond with possible answers. By default a Q and A forum requires students to post once before viewing other students' postings. After the initial posting, students can view and respond to others' postings. This feature allows equal initial posting opportunity among all students, thus encouraging original and independent thinking.

Force everyone to be subscribed ?

- *Yes, forever.* This setting makes sure that when you post something in the forum, all participants are notified by email. We recommend this setting.
- *Yes, initially.* Allows students to unsubscribe from the forum to stop getting email.
- *No.* Students have to explicitly subscribe to the forum to get notifications. By choosing this option, it is unlikely that when you post something to the forum, students will get an email copy.

Chapter 6

Quizzes and Feedback

6.1 When and how to use quizzes and feedback ?

Checking knowledge

- *Before a lecture*, the responses to a quiz are useful to identify preconceptions (“What do students know/believe about the subject?”). The teacher uses the answers of the students as a starting point for the course. A caveat is that it might be difficult to motivate the students to participate in such a quiz. A simple version of this type of polling can also be realized with the “Choice” activity.
- *As an exercise after the lecture*, the students might test their knowledge by answering a series of questions which either test their memory (e.g. simple knowledge questions like “What is the effect of temperature on the speed of a reaction: a) speed up b) slow down c) none”) or their comprehension of the content (e.g. by applying the information from the course in solving a problem “What can be done to speed up the reaction in this specific situation: a) increase the temperature by 10% b) decrease by 10% c) augment pressure to 5 bars, ... ”).
- *As an examination tool* quizzes offer the advantage of automatic correction and scoring. Of course in this context it is critical that students do not chat or email the responses to each other. As a preventive measure, Moodle can mix the order of questions and responses so that students do not get the same questionnaire. The system can also present que quiz in a popup window that prevents copy and paste. Finally, the weight of the quiz in the final grade probably should not be too large. CRAFT can also assist you in automatically scoring paper-based quizzes (contact Florence.Colomb@epfl.ch by mentioning the Electric Paper system).

Getting feedback about the course

The ‘Feedback’ activity (module) allows you to quickly build a questionnaire and collect responses that you can export to excel.

- Especially during their initial rollout, exercises and practical work assignments need fine-tuning. A questionnaire can typically be used to collect

short feedback about the level of difficulty and the time needed to complete the exercises. Teachers can use this information to adapt their course “on the fly”.

Chapter 7

Project Format

Background

Moodle offers several course formats which allow teachers to control the appearance of the sections (or topics) in their course (see Moodle's teacher manual¹ for snapshots). The *topic* format resembles the structure of a book where one section corresponds to one topic of the course. The *weekly* format resembles the structure of a calendar where one section corresponds to one week of the course. The *social* format simply consists of a single discussion forum without content sections.

The *project* format is similar to the topics and weekly formats, but allows teachers to define arbitrary durations for the sections (called project phases in this context).

Aims and Principle

The goal of the project format is to facilitate the management of a project for teachers as well as for students. It does this by visualising the phases and the deliverables of the project in a simple Gantt chart in the first section of the course (see Figure 7.1). This enables a quick overview of phase durations and deadlines.

It is also of interest for the teachers to know quickly whether all students have submitted their deliverables and whether all students got feedback. To this end, the milestones on the Gantt chart are represented by using a simple color coding that reflects whether things are OK (green), in progress (orange) or missing (red).

A project is simply a collection of phases. A project phase is in fact a normal Moodle course topic that is additionally defined by a start date and an end date. Within each phase, assignments are treated as deliverables for this phase and represented in the Gantt chart as milestones. A project-based course can in fact contain a mix of normal topics and phases.

¹<http://moodle.org/doc/?file=teacher.html#settings>

Example

A working example can be found online at the Project Format Demo Course². In the Gantt chart each ‘bar’ represents a phase of the project and ‘squares’ represent deliverables.

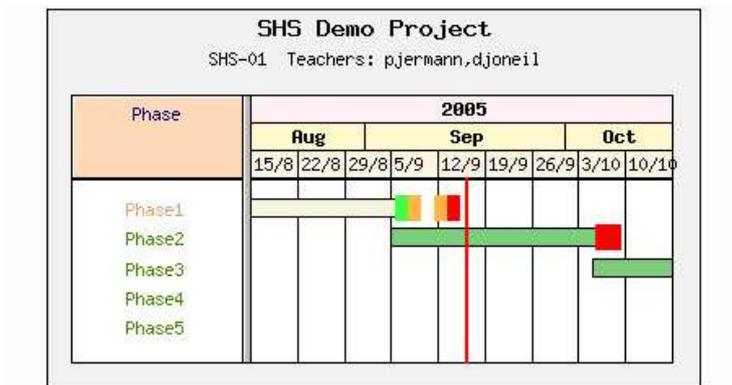


Figure 7.1: Snapshot of the gantt chart which is automatically generated from the structure of a project based course.

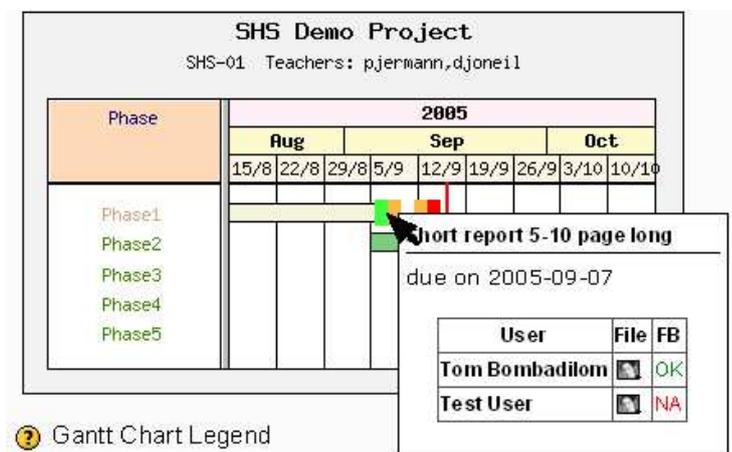


Figure 7.2: By moving the mouse over a deliverable’s icon, a popup shows a summary table with all students listed in rows

²<http://moodle.epfl.ch/course/view.php?id=12>

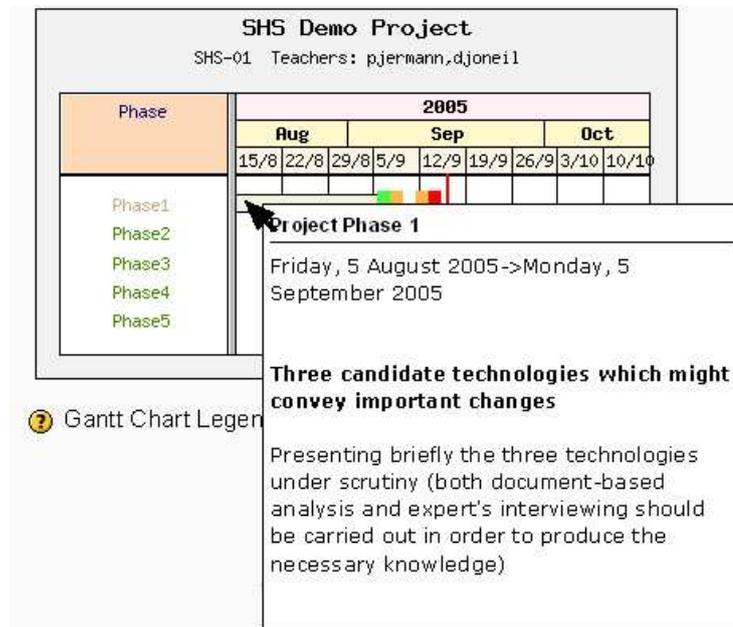


Figure 7.3: By moving the mouse over a phase, a popup shows a short description of the phase

7.1 Configuration

Setting the course format

Go to the 'Settings' interface for the course and choose 'Project Format' for the course format as is shown below.



Figure 7.4: Choosing the project format from the pulldown

Topics and phases

A project-based course can contain phases with or without a duration. The phases without time information do not appear in the Gantt chart and can be used to distribute resources, propose quizzes, etc ... The timed phases are typically used to structure the project based activities.

To determine whether a phase appears in the Gantt chart or not, edit the phase, and set the checkbox "Show in Gantt" accordingly.

Phases can be moved up and down the course as normal topics.

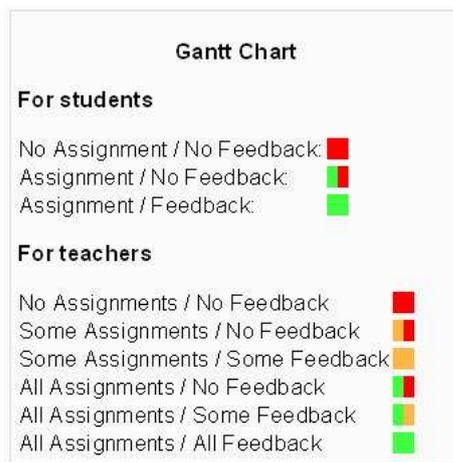


Figure 7.6: The color coding reflects whether everything is ok (green), in progress (orange) or missing (red).

Chapter 8

Links with IS-Academia

IS-Academia and Moodle

This article describes the specificities of “IS-Academia enrolments” for Moodle at EPFL.

Enrolments

Background

Enrolments determine who has access to a course. Moodle allows for several ways to manage enrolments. The most basic way consists of the teacher adding students by choosing them from a list of potential students. This can be tedious as the number of students increases. A more sophisticated way consists of using an “enrolment key”, a course password that you communicate to your students and that they will have to type only the first time they try to access your course. Finally, it is possible to connect Moodle to an external database, which provides information about who can access courses. This is what happens at EPFL in relation with information provided by IS-Academia¹.

Aims and Principle

Within three weeks following the beginning of the semester, students have to choose their courses. Their choices are registered in IS-Academia. Moodle then retrieves information from IS-Academia on a regular basis (more or less three times a day) and updates its own enrolment information accordingly.

Having access to a course (to be listed as a participant in IS-Academia) is not equivalent to being an active participant in a Moodle course. The students will be active users in your course *only* when they have accessed your course once (they have logged in, and browsed to your course).

To see who is an active student in your course, click on the link entitled “Participants” in the box entitled “People”. You will get a list like shown in figure 8.1.

¹<http://is-academia.epfl.ch/>

Teachers 🌞 🗨️			
First name / Surname	City/town	Country	Last access ↑
 Nicolas Nova			11 days 22 hours
 Pierre Dillenbourg	Lausanne	Switzerland	Never

3 Students 🗨️			
First name / Surname	City/town	Country	Last access ↑
 Test User	Lausanne	Switzerland	4 days 20 hours
 Stefan Müller	Lausanne	Switzerland	94 days 16 hours
 Admin User	Lausanne	Switzerland	Never

Figure 8.1: The list of participants in your course

Configuration

For Moodle to be able to establish the correspondance between its own course and the course in IS-Academia, we use a special key that identifies the academic year as well as the subject matter and the teachers involved. This key appears in the “ID number” entry of your course settings.

ID number: ?

Figure 8.2: The special ID number taken from IS-Academia

You don’t have to worry about this key yourself. To benefit from the IS-Academia enrolments, simply tell us the “official” name of your course as you described it for the “livret de cours”. We will find the corresponding key and modify the settings of your course accordingly.

Complements

You may well want your students to access your site before they have officially registered for your course through IS-Academia. This is done by using an “enrollment key”. You would communicate this “course password” to the students and they will have to type it in when they first try to enter your course. The “enrolment key” can be defined in the settings screen for your course.

Enrolment key: ?

If you would like to add individual students to your course, you can choose the "Students" link from the Administration box and move students in the interface below from the right side (potential students) to the left side (enroled students). See details on page 10.

Course Booklet

We have developed an information box for your Moodle course which provides information contained in IS-Academia. The functionalities are:

1. Offer a direct link from your course to the course booklet from IS-Academia. Students simply have to choose the section they belong to to get the official course description.
2. A link to the official list of enrolled students in IS-Academia
3. A list of reference books which are proposed by the main library for your course. There is also a link that you can use to send a request to the librarians to add a new reference book (this link is visible only for teachers).



To add the information box follow these simple steps: a) click on "Turn editing on" b) At the lower right side of the page, look for a block called "Blocks". Choose "Course Booklet (IS-Academia)" in the drop-down menu entitled "Add ..."

In order to work correctly the Course ID number in the settings of your course ("Administration" block -> "Settings") has to be filled in with a special identifier, e.g. 2007-2008\$M24346276_P123676. If it is not the case, please reply to this email and specify the URL of your course.

To remove the box, click on the cross icon.

Chapter 9

Using Modules

Many activities are available in moodle. The most commonly used are ‘Assignment’, ‘Quiz’ and ‘Questionnaire’. For details about how to set up these activities, have a look at the Moodle Teacher’s Manual¹ or the french Manuel de l’enseignant².

To add an activity:

1. activate editing (click on the “Turn editing on” button on the upper right side of the window)
2. choose an item in the pull-down menu entitled “Activities” inside a week/topic/phase block.



9.1 Collecting assignments

9.1.1 Assignment (Devoir)

From the Moodle help file:

¹<http://moodle.org/mod/resource/view.php?id=3968>

²<http://moodle.org/mod/resource/view.php?id=2812>

Assignment

Assignments allow the teacher to specify a task that requires students to prepare digital content (any format) and submit it by uploading it to the server. Typical assignments include essays, projects, reports and so on. This module includes grading facilities.

We needed some way at EPFL to set up group assignments, i.e. one user uploads the file but all the members of his or her group "benefit" from the submission. Also, we wanted to allow teachers to grade groups, i.e. assign the grade and give feedback only once for all the students in a group. In addition to this 'group' feature, the new EPFL assignment allows students to submit several files and allows the teacher to attach review files as a feedback. For details about this type of assignment, see the corresponding article in this manual on page 19.

The advantages of using this module rather than email to collect submissions are

1. that submissions are automatically stored and organised in a central place and
2. that the system allows grading and distribution of feedback. Teachers can define their own grading scales (e.g. 1...6 or 'poor'...'excellent') from the Administration Block (follow the 'Scales' link).

9.1.2 Database (Base de données)

The database module is the 'Swiss Army Knife' to collect structured information. From the Moodle documentation wiki:

The Database module allows the teacher and/or students to build, display and search a bank of record entries about any conceivable topic. The format and structure of these entries can be almost unlimited, including images, files, URLs, numbers and text amongst other things. You may be familiar with similar technology from building Microsoft Access or Filemaker databases.

More information is available at http://docs.moodle.org/en/Database_module

9.2 Communication

9.2.1 Forums

Forum

From the Moodle help file:

This activity can be the most important - it is here that most discussion takes place. Forums can be structured in different ways, and can include peer rating of each posting. The postings can be viewed in a variety of formats, and can include attachments. By subscribing to a forum, participants will receive copies of each new posting in their email. A teacher can impose subscription on everyone if they want to.

Each course contains a forum added by default. Several other forums can be added to the sections/topics/phases of the course to discuss specific questions.

9.2.2 Chat



From the Moodle help file:

The Chat module allows participants to have a real-time synchronous discussion via the web. This is a useful way to get a different understanding of each other and the topic being discussed - the mode of using a chat room is quite different from the asynchronous forums. The Chat module contains a number of features for managing and reviewing chat discussions.

Moodle also contains a short messaging service which allows users to exchange chat like messages. It is available from the 'Online users' block on the mainpage.

9.3 Testing knowledge

9.3.1 Quizzes (Test)



From the Moodle help file:

This module allows the teacher to design and set quiz tests, consisting of multiple choice, true-false, and short answer questions. These questions are kept in a categorised database, and can be re-used within courses and even between courses. Quizzes can allow multiple attempts. Each attempt is automatically marked, and the teacher can choose whether to give feedback or to show correct answers. This module includes grading facilities.

The quiz module might be used to allow students to check upon their knowledge, to organize exercises with a large number of students (grading is made automatically), or to organize exams (time to respond to the quiz can be restricted to the duration of the exam).

9.3.2 Choice (Sondage)



From the Moodle help file:

A choice activity is very simple - the teacher asks a question and specifies a choice of multiple responses. It can be useful as a quick poll to stimulate thinking about a topic; to allow the class to vote on a direction for the course; or to gather research consent.

9.3.3 Feedback (Feedback)

A feedback consists of a list of questions. The difference between the Feedback and que quizz is that there are no correct or wrong answers defined and that there is no feedback provided to the students about their answers. This activity is typically used to collect feedback from the students, e.g. about the weekly exercices.

For general questionnaires which are not related to your course, we recommend the use of Inform³ developed by the KIS team at EPFL.

9.4 Managing time

9.4.1 Scheduler (Consultation)



The Scheduler module allows the management of a series of meetings, or the access to a resource (e.g. a lab room or a measurement device). The teacher defines a serie of timeslots that can then be chosen online by the students. When students choose one of the available slots, a new event is automatically created in the calendar.

9.5 Building knowledge

9.5.1 Glossary (Glossaire)



From the Moodle help file:

³<http://inform.epfl.ch/welcome.php>

This activity allows participants to create and maintain a list of definitions, like a dictionary. The entries can be searched or browsed in many different formats. The glossary also allows teachers to export entries from one glossary to another (the main one) within the same course. Finally, it is possible to automatically create links to these entries from throughout the course.

This module might be used to ask each student to define one concept of the course based on essential readings. Students will benefit from their predecessor's work.

9.5.2 Wikis



From the Moodle help file:

A Wiki enables documents to be authored collectively in a simple markup language using a web browser. "Wiki wiki" means "super fast" in the Hawaiian language, and it is the speed of creating and updating pages that is one of the defining aspects of wiki technology. . . . The Moodle Wiki module enables participants to work together on web pages to add, expand and change the content. Old versions are never deleted and can be restored.

One popular use of this module in education consists of asking the students to build a website with content related to the course, for instance.

9.5.3 Journal



From the Moodle help file:

This module is a very important reflective activity. The teacher asks the student to reflect on a particular topic, and the student can edit and refine their answer over time. This answer is private and can only be seen by the teacher, who can offer feedback and a grade on each journal entry. It's usually a good idea to have about one Journal activity per week.