



Untis

Getting started



[untis.com](https://www.untis.com)

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1 Introduction

The purpose of this brochure is to offer a fast, uncomplicated introduction to the most important functions of Untis. Please refer to the manuals for further information.

You can download or order all of our manuals from our website: www.untis.at

Should you have any questions regarding Untis please contact your Untis partner. You will also find the complete list of all [Untis partners](#) on our website.



2 Installation

For installing the software please double click on the file "SetupUntis[Version]UK.exe". Der Setup-Assistent unterstützt Sie bei der weiteren Installation von Untis

We recommend that you do not change the default installation path. On an English Windows system this will be C:\Program Files\Untis, or C:\Program Files (x86)\Untis on a 64-bit system. Make sure you always perform installation with administrator rights. The same applies to all other freely selectable paths, descriptors and names, since this quick start brochure as well as all other manuals always refer to the suggested defaults.

The setup wizard will inform you as soon as installation is complete. From now on you can launch Untis by clicking on the application icon that has been placed on your desktop.



Note: Central installation

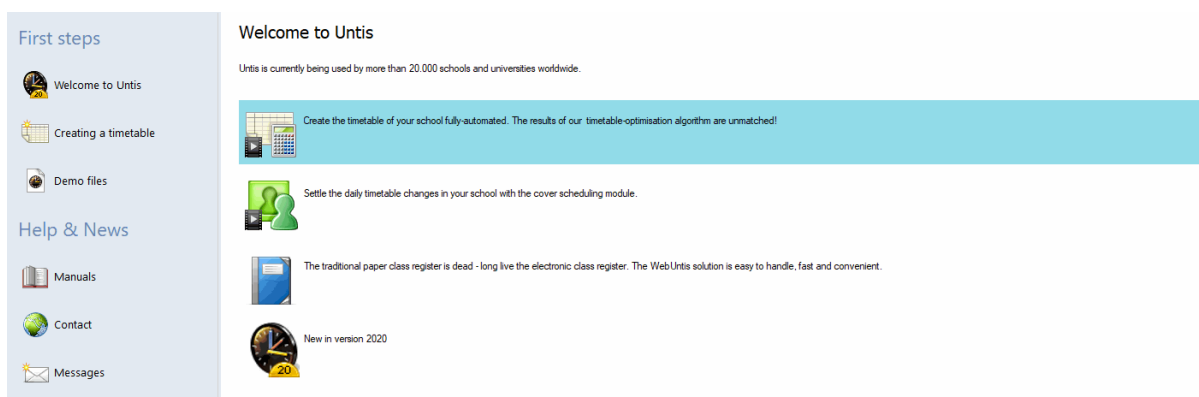
You can also install Untis on a central server and then give individual clients access to Untis.exe. Please note that Untis must have been started at least once on the client PCs with administrator rights prior to this.

Warning: Windows Version

Untis 2020 requires at least Windows 7

2.1 Welcome screen

When you start Untis for the first time a welcome dialogue will appear displaying information about Untis. It will also allow you to call the data entry wizard that will guide you through the input of essential data.



You can launch the wizard with a double click.

2.2 Entering licence data

You will first be prompted to enter your licence data. (Your Untis partner will have provided you with a document containing your licence numbers.)

Licence data

Licence data

School name
Demostración DEMO

Licence No.
ABC-123
DEF-456
GHI-789

3 day Untis license

OK

Demostración/Evaluación

Expiration date

School size
for 700-1500 students

Modules

Standard package

- Optimisation
- Room optimisation + off-site bui...
- Scheduling dialogue

Big modules

- Cover planning
- Course scheduling
- Minutes timetable
- Calendar - Year Planning

Small modules

- Lesson planning - value calc.
- Break supervision
- Department timetables
- Students timetables
- Info timetable
- Multiweek timetables
- Multiple terms

Footer Untis GmbH

Country Germany Region Customer-Number 0

Use of WebUntis

Please make sure to enter the licence data correctly. The application will automatically compute the [modules](#) you have licenced (cover planning, break supervisions etc.). Confirm your input with <OK>. You will find an overview of the individual modules available in the [Modules](#) chapter.

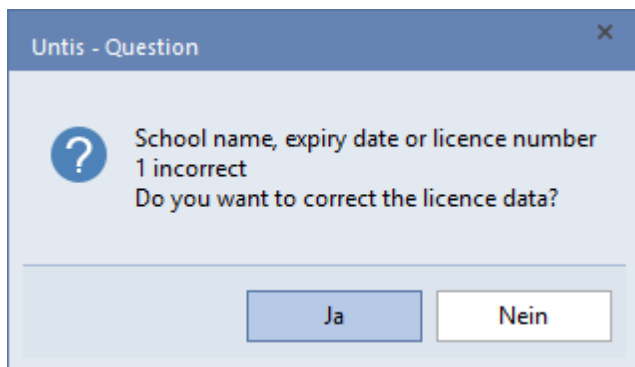
Please note that the licence data are stored in a file and not in the application. If you therefore open the Untis file (.gpn file) with the registered licence data on another computer using Untis you will not have to re-enter the licence data.

Temporary licence

If you have a temporary licence, you must make a corresponding entry in the 'Expiry date' field. If you do not yet have a licence you may use Untis on a trial basis for 3 days. For this, click on the button <3-day express licence>.

Incorrect licence data

If an error message is displayed, please check your input with the details on the licence data document and correct the entry. All the characters of the school name and the licence number must be entered exactly as they appear on the document.



2.3 Help

If you need general help at any point in time, press <F1> to display help information and select 'Contents'. You will find a manual providing detailed information on all topics.

However, If you require specific information on e.g. a particular button or input field, activate the field in question and press <F1>. You can also click on the "Help" button and then move the help arrow to the relevant field before clicking once more.

Tip: Offline help

When you press F1 you are connected to the respective help topic on our website. If you want to use our online help without being connected to the internet, you have the possibility to consult it offline, just go to 'Help topics | Download help files' you can save the respective data on your PC.

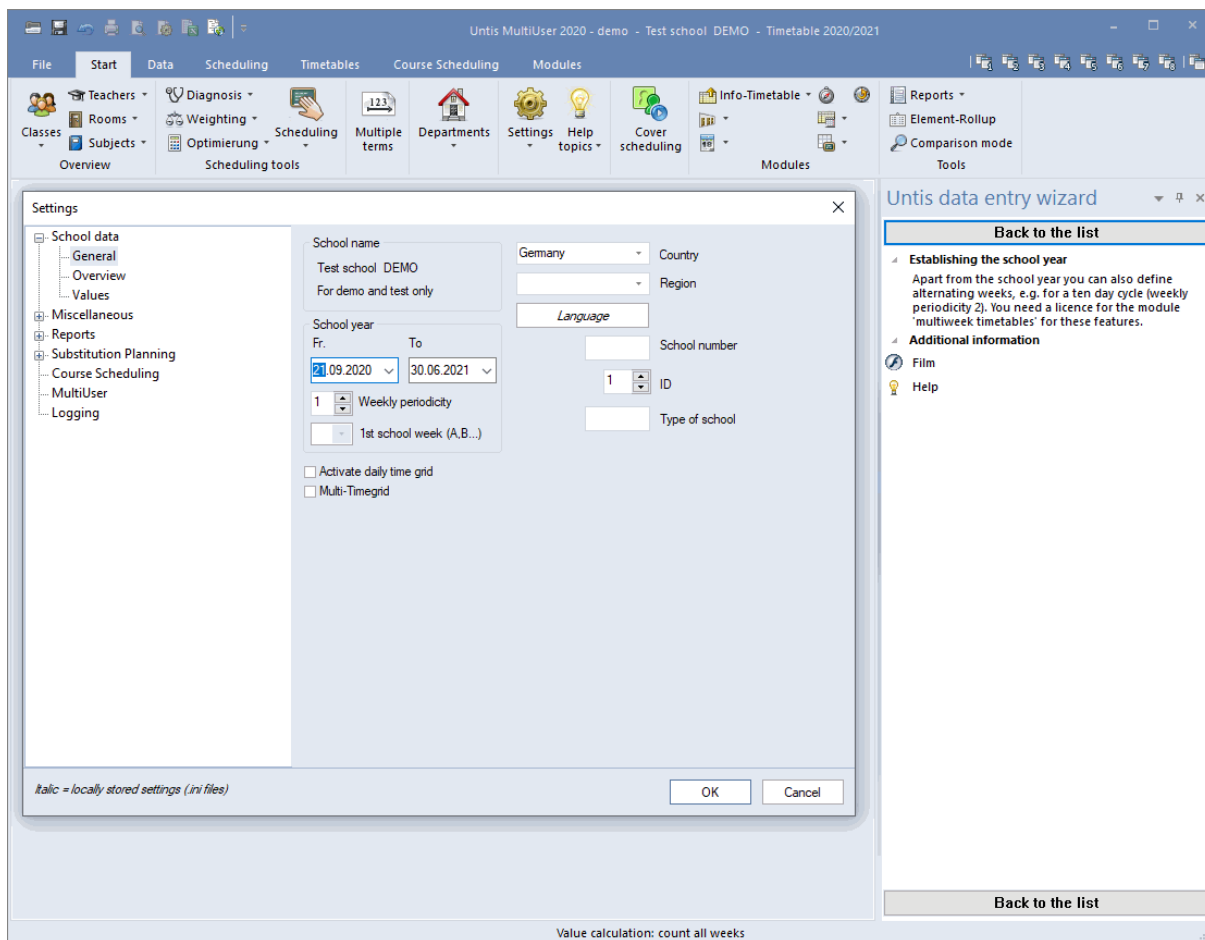
If you have questions when you are familiarising yourself with Untis please contact your Untis partner by phone or email. You will find their details on our [website](#).

3 Data entry wizard

Data entry wizard The data entry wizard opens automatically whenever a new file is created and can be accessed at any time via the <Data Entry Wizard> on the Data tab.



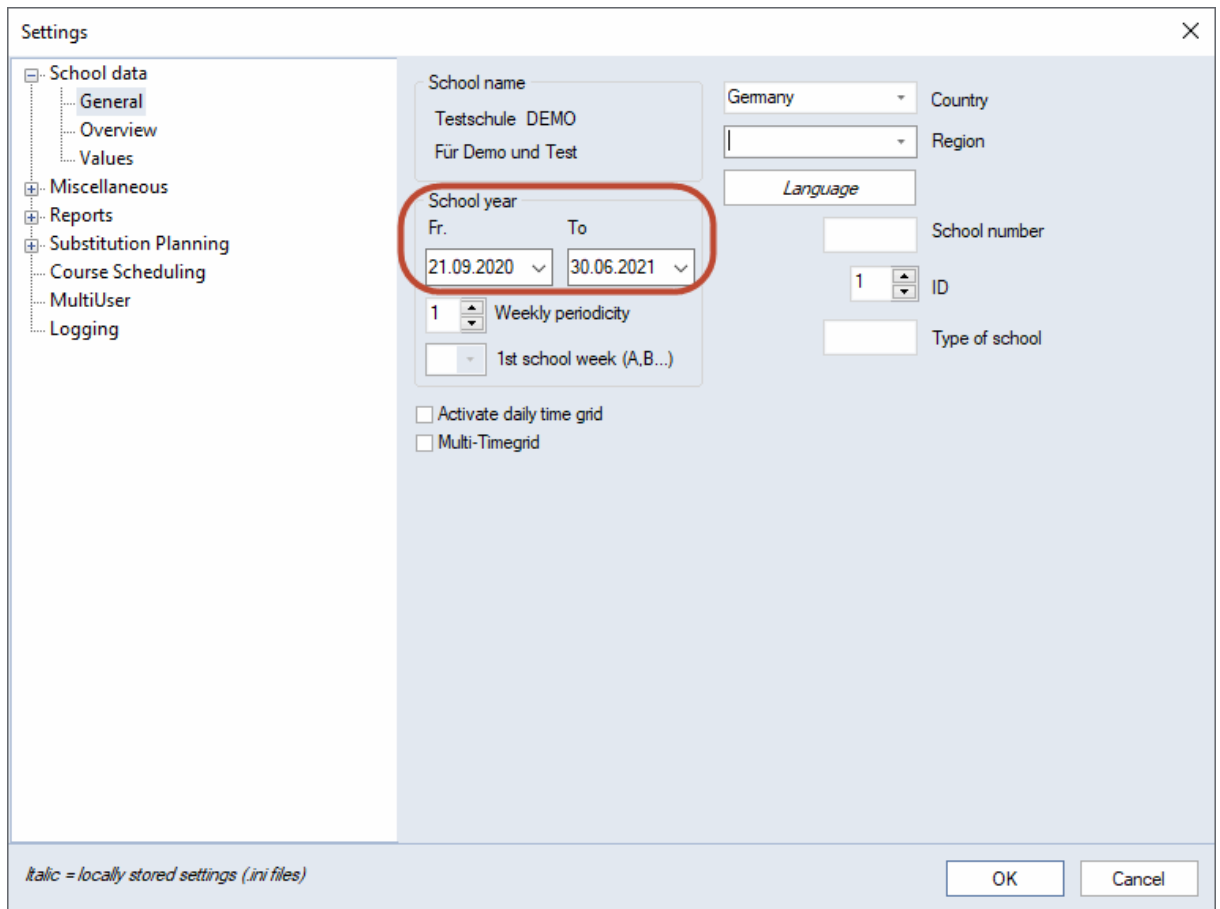
The sequence of tasks in the wizard corresponds to the steps that should be taken when a timetable is created. It starts with 'Setting up the school year'. Any window you open via the Data Entry Wizard can also be accessed via the menu navigation of the ribbon. In the following the menu navigation is described for every function.



4 School data

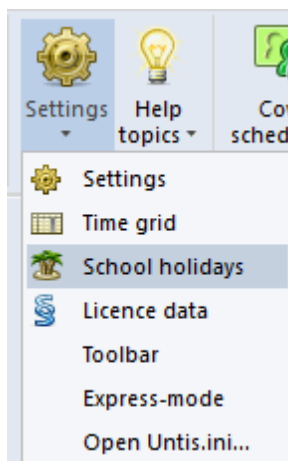
4.1 School year

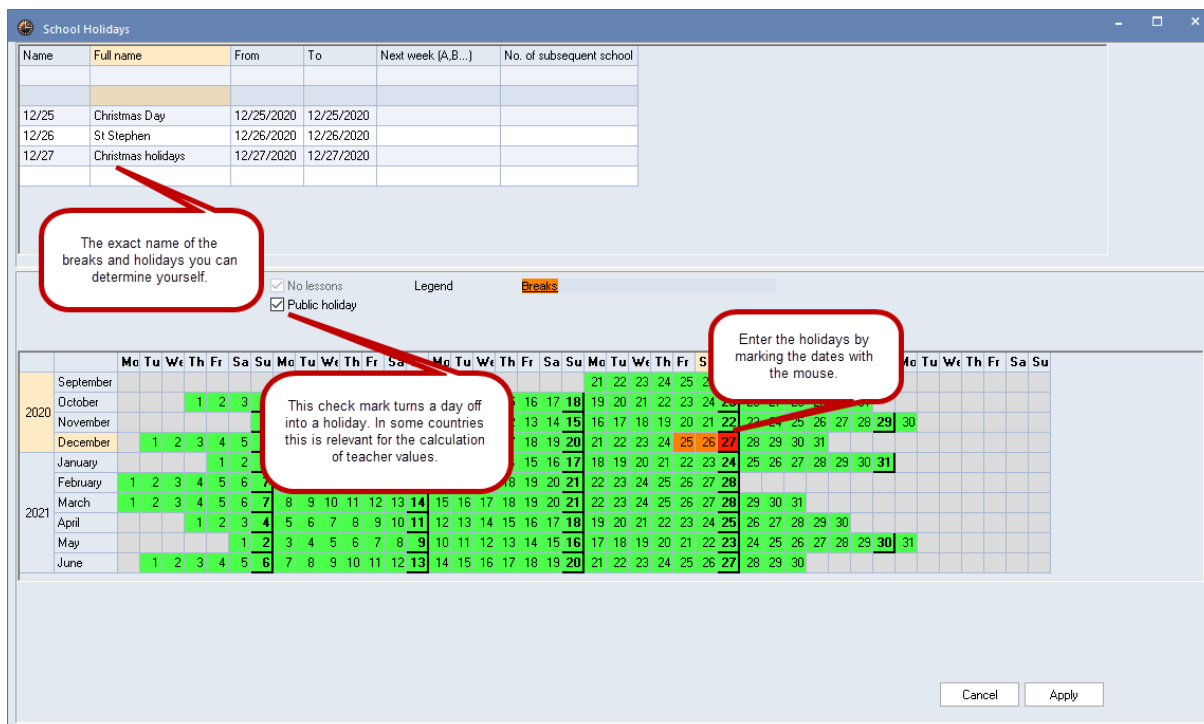
Go to <Settings> on the Start tab and enter the length of the school year. Do not include the summer holidays in your school year. Confirm your input with <OK>.



4.2 Holidays

You can enter the holidays and public holidays for the current school year via 'Settings | School holidays'.





Holidays are important if you use cover planning for daily changes to the timetable. The holiday entries are also taken into consideration for the calculation of lesson ratings for teachers. Holidays have no influence on timetable optimisation.

4.3 Time grid

Time grid Use the time grid to specify on how many days in the week lessons are held, how many periods per day are used for teaching and which of these periods are regarded as morning or afternoon periods.

The following times have been entered for the school in the example below:

- 5 days per week (Monday to Friday)
- 10 periods per day
- a maximum of 4 afternoon periods per day
- no lessons on Friday afternoons

The 10 periods per day are divided into 6 morning and 4 afternoon periods. The distinction between morning and afternoon is important for the position of a possible [lunch break](#) and can also influence – with additional settings – when lessons are scheduled (e.g. fringe periods, optional subjects, etc.).

In our example there are only 6 periods taught on Fridays. You can achieve this by marking the 7th to 10th periods and pressing the <Free> button.

Enter the length of each period in the relevant fields in the grid for the individual periods. This allows you to enter different durations for e.g. afternoon and evening periods, if necessary.

Time grid

General Breaks Substitute

6 Number of days (1 to 7)

8 Maximum number of periods per day (1 to 60)

Monday First school day of the week

1 Period number for the first period of the day (1 or 0)

Entry:

Morning

Free

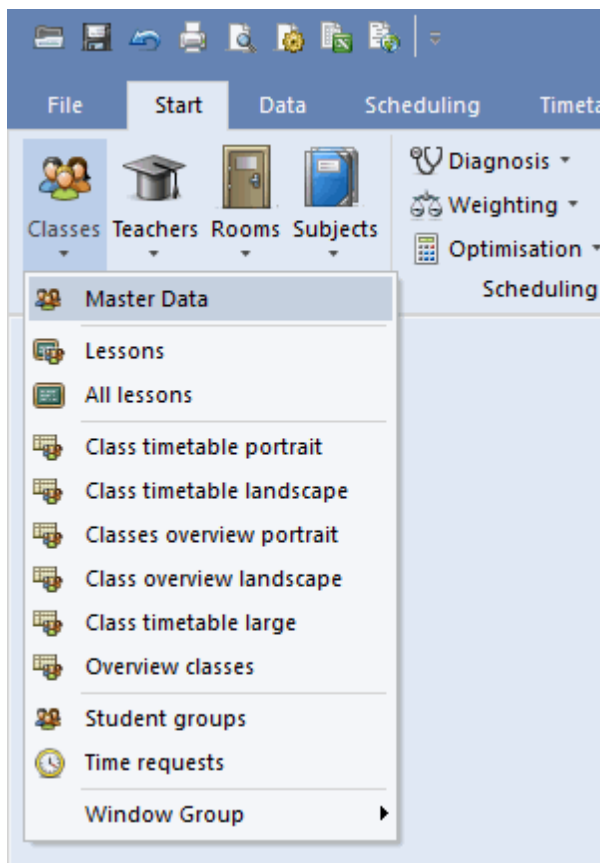
Afternoon

Period number	1	2	3	4	5	6	7	8
Period label								
	8:00	8:55	9:50	10:45	11:40	12:35	13:30	14:25
	8:45	9:40	10:35	11:30	12:25	13:20	14:15	15:10
Monday	Mornii	Mornii	Mornii	Mornii	Mornii	Aftern	Aftern	Aftern
Tuesday	Mornii	Mornii	Mornii	Mornii	Mornii	Aftern	Aftern	Aftern
Wednesday	Mornii	Mornii	Mornii	Mornii	Mornii	Aftern	Aftern	Aftern
Thursday	Mornii	Mornii	Mornii	Mornii	Mornii	Aftern	Aftern	Aftern
Friday	Mornii	Mornii	Mornii	Mornii	Mornii	Aftern	Aftern	Aftern
Saturday	Mornii	Mornii	Mornii	Mornii	Mornii			

OK Cancel Apply

5 Master data

Master data refers to all school-specific resources in Untis which are essential for the creation of the timetable. These include [Rooms](#) , [Classes](#) , [Teachers](#) and [Subjects](#) . Via to the 'Start' tab you can access different windows to define master data (e.g. 'Classes | Master data') .



The following examples are based on file demo.gpn.

Creating new master data elements

You can create a new element in the master data window (e.g. a new class) by clicking in the last row, which is marked with a * (asterisk), and entering a name and a full name.

Tip: Full name

Specifying a full name is optional but is advisable. Teacher short names in particular (generally consisting of three to five letters) might not be instantly recognisable. Short names can be used for e.g. the timetable and long names for printed reports.

Rearranging master data elements

If you wish to rearrange a master data element click on the first (blue) column of the class that you wish to rearrange and hold the mouse key pressed.. Now drag the element to the desired position in the list.

Deleting master data elements

You can delete a master data element by clicking on the <Delete> button.

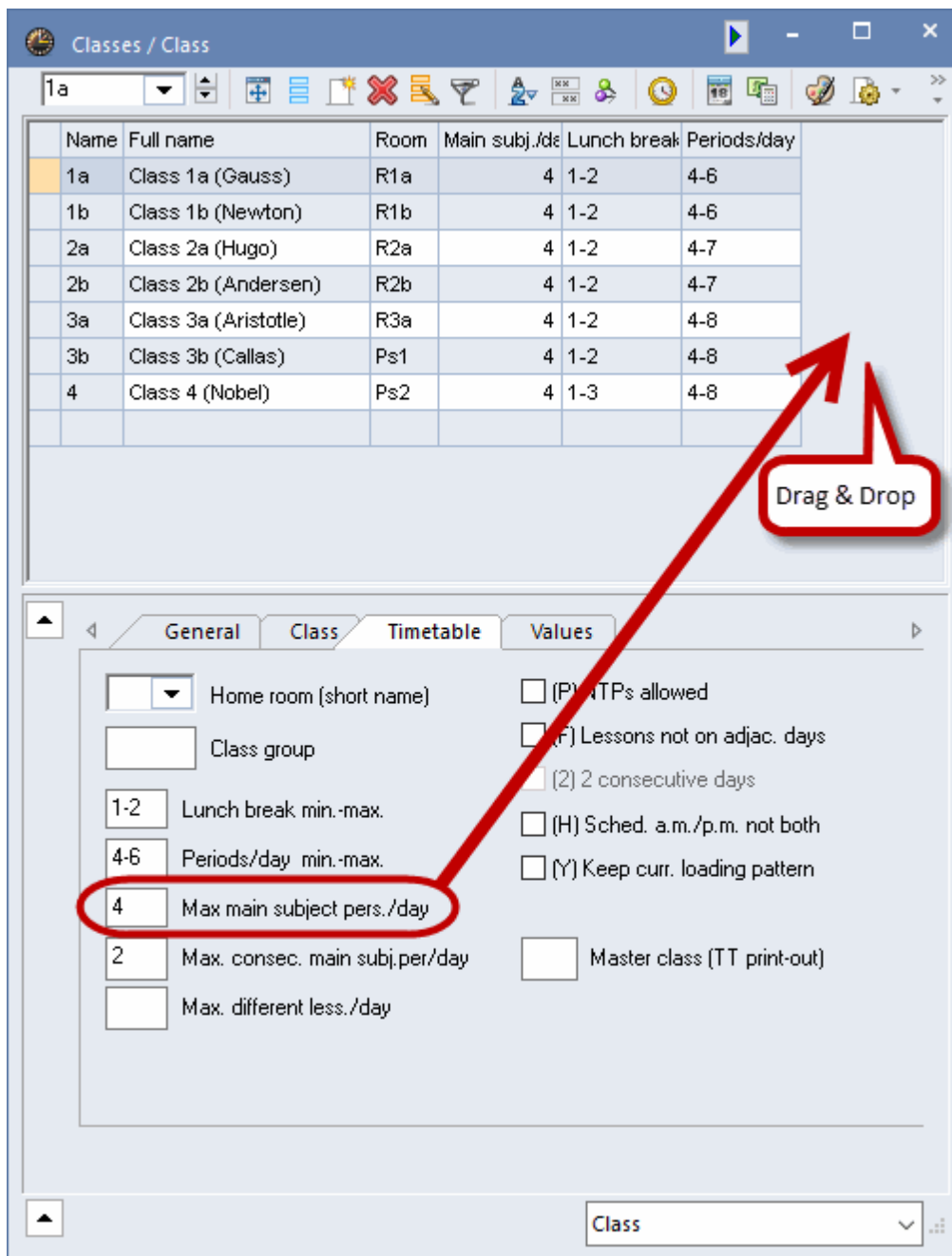
The screenshot shows a window titled 'Classes / Class' with a search bar containing '1a'. Below the search bar is a toolbar with various icons. The main area contains a table with the following data:

Name	Full name	Room	Main subj./day	Lunch break	Periods/day
1a	Class 1a (Gaus)	R1a	4	1-2	4-6
	Class 1b (New)	R1b	4	1-2	4-6
2a	Class 2a (Hugo)	R2a	4	1-2	4-7
2b	Class 2b (Hansen)	R2b	4	1-2	4-7
3a	Class 3a (Little)	R3a	4	1-2	4-8
3b	Class 3b (Callas)	Ps1	4	1-2	4-8
	Class 4 (Nobel)	Ps2	4	1-3	4-8

At the bottom left of the window is a small downward-pointing arrow icon, and at the bottom right is a dropdown menu labeled 'Class'.

Displaying/hiding columns

A great deal of additional information may be stored for each master data element. You can view this information by clicking on the arrow at the bottom left of the master data window. If you now wish to display for example the field 'Max. main subjects/day' in the upper section of the window (grid view), use drag & drop to place it there.



If you wish to hide a column, hold the <CTRL> button pressed and drag it from the grid view at the top to the lower section (form view).

5.1 Rooms

The procedure for entering rooms, classes, teachers and subjects is the same for all elements. Its principle will be explained with rooms.

Room name

Use an appropriate abbreviation which uniquely characterises the room of your school, e.g. GYM1 for Gym Hall 1 or R10 for room number 10.

Tip: Short room names

We recommend that you include at least one character in each room name and do not use numbers

exclusively (e.g. R10 instead of 10). This helps to avoid confusion with possible classes of the same name and increases the legibility of the timetable or cover schedule. Rooms should not be given the same names as classes (e.g. R1a for class 1a's classroom) as this would mean having to rename the rooms each school year.

Full name

Enter a full name which describes the room in more detail.

The list of rooms in the file demo.gpn shows the classes and subject rooms entered. You should enter [alternative rooms](#) and [room weightings](#) for automated scheduling.

5.1.1 Alternative room

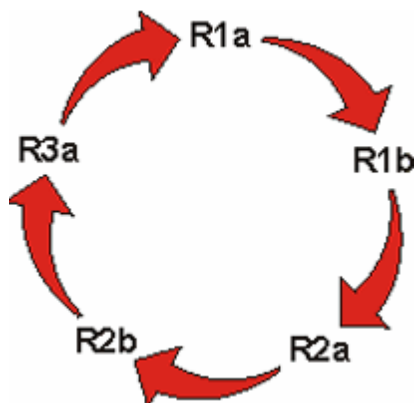
The alternative room is used for scheduling lessons if the room originally desired is already booked. In our example Gym1 is the alternative room for Gym2 (and vice versa).

Name	Full name	Altern. room	Rm. Weight
SH1	Sports Hall	SH2	4
SH2	Sports Hall	SH1	4
PL	Physics lab		3
WS	Workshop		3
TW			4
KÜ			4
R1a			2
R1b			2

Rings of alternative rooms

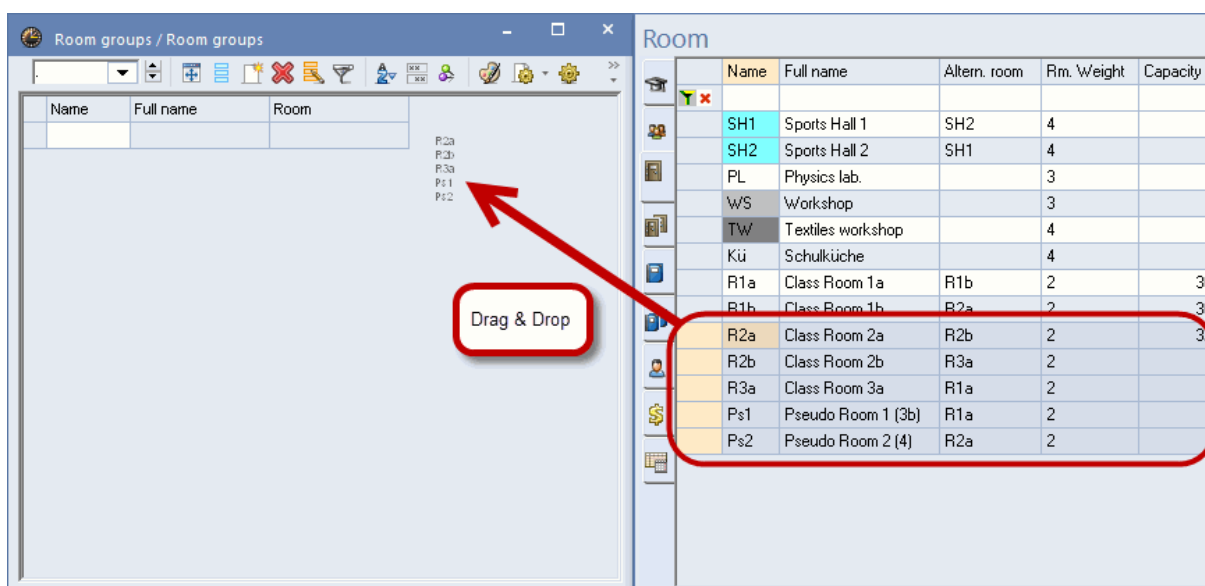
You may string functionally equivalent rooms together in such a way that they form a ring of alternative rooms. This has already been entered in the file demo.gpn. The alternative room for R1a is R1b, the one for R1b is R2a and so on until the ring is closed.


If, during automatic timetable scheduling (optimisation), it turns out that the desired room for a lesson (e.g. R1b) is already occupied, then the next rooms in the ring (R2a ...) will be checked until a free room is found in the ring.



5.1.2 Classes without designated rooms

If you have classes without designated rooms in your school, you can group any number of rooms together under a single name via 'Master data | Special data | Room groups'. If for example a class without a designated room is to be taught primarily on the first and second floors, you can define a corresponding group of rooms. A second class without a designated room should – wherever possible – only change between rooms on the third and fourth floors. You can subsequently enter the room groups as 'home room' or 'subject room' when [defining lessons](#) and Untis will then assign a room from the room groups to these lessons during optimisation.



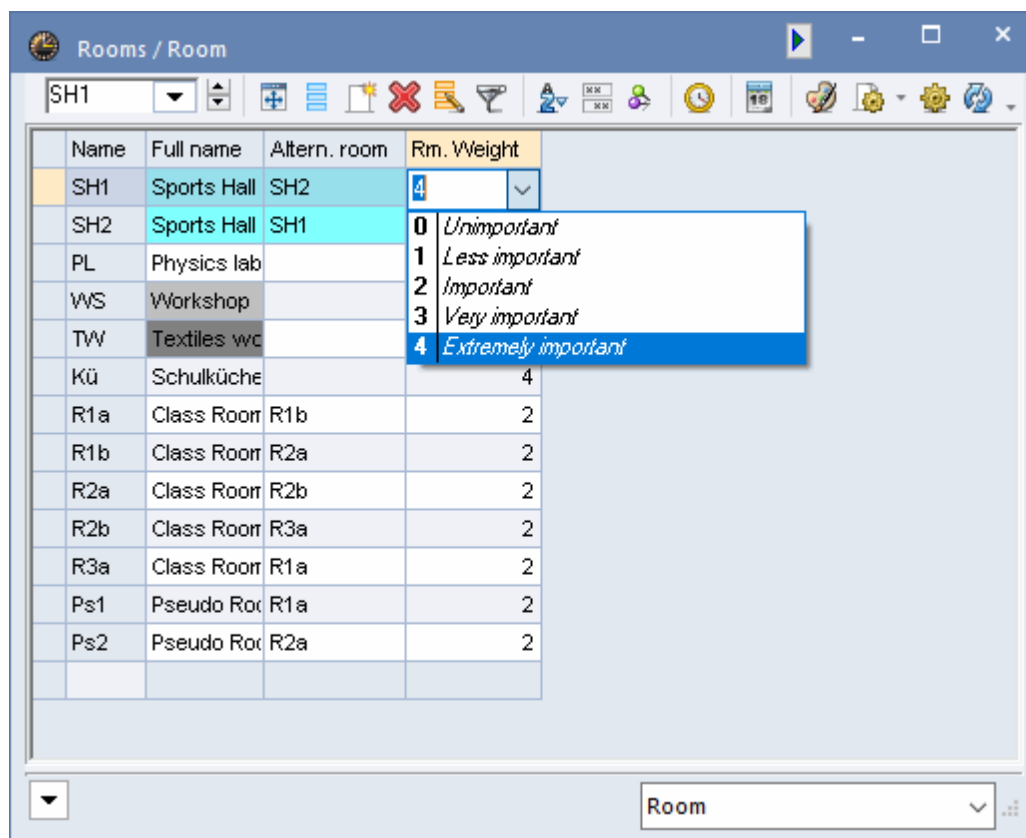


Tip: Element rollup
 You can drag rooms into the 'Room' field using drag&drop by clicking on the <Element rollup> button in the main toolbar.

5.1.3 Room weighting

Room weighting The room weighting specifies the importance of a room for the lessons which are to be scheduled in it.

A room weighting of 0 indicates that the room (and its alternative rooms) is unimportant for the lesson. A room weighting of 4 signifies that scheduling the lesson only makes sense if the desired room (or one of the alternative rooms) is available. Physical education lessons, for example, only make sense if one of the gym halls is free, and cookery only makes sense if the kitchen is available, whereas maths may be taught in any room of the school which happens to be free.




We recommend that you leave the other input fields free for the moment. You can always refine your entries at some later time when you have familiarised yourself with the basic Untis functions and wish to adjust your timetable to take account of the specific characteristics of your school. Detailed information on these fields can be found in the user manuals and in the online help.

5.1.4 Blocking rooms

You can block a room from automatic scheduling if it is unavailable at certain times because, for example, it is in use by another school.

Example: Room SH1 is used by another school on Mondays and Thursdays from periods 8 to 10, and on Friday.

1. Select SH1 in the list of the rooms by clicking on it.
2. Click on the button <Time requests>.  ..
3. Click on the <-3> button.
4. Select the periods in which you wish to block the room by marking them while holding the left mouse button pressed.

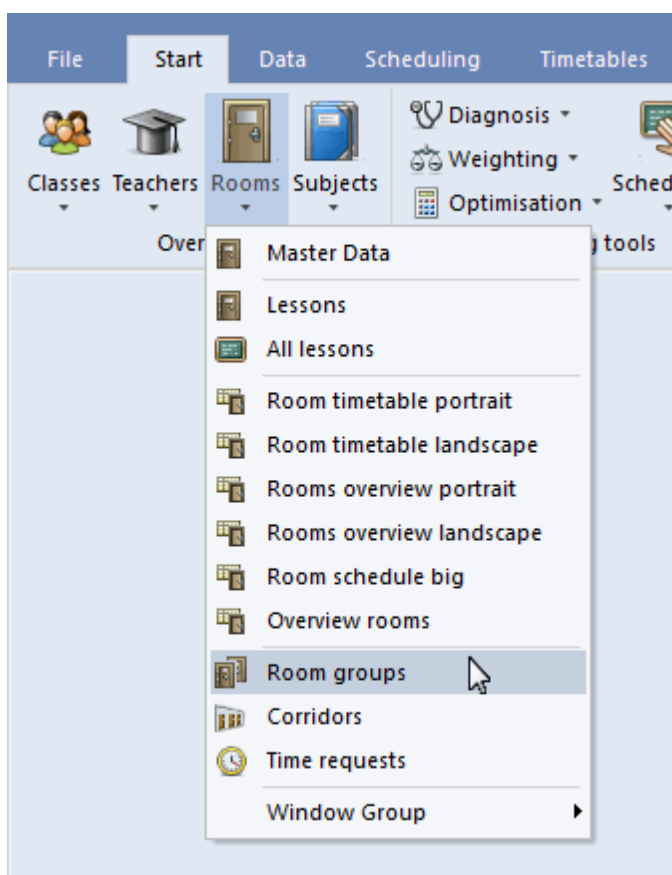
The screenshot shows a window titled 'Time requests / Room'. At the top, there is a dropdown menu with 'SH1' selected and 'Sports Hall 1' displayed next to it. Below this is a grid with columns numbered 1 to 8 and rows for the days of the week: Monday, Tuesday, Wednesday, Thursday, and Friday. The grid contains the following values:

	1	2	3	4	5	6	7	8
Monday						-3	-3	-3
Tuesday								
Wednesday								
Thursday						-3	-3	-3
Friday	-3	-3	-3	-3	-3	-3	-3	-3

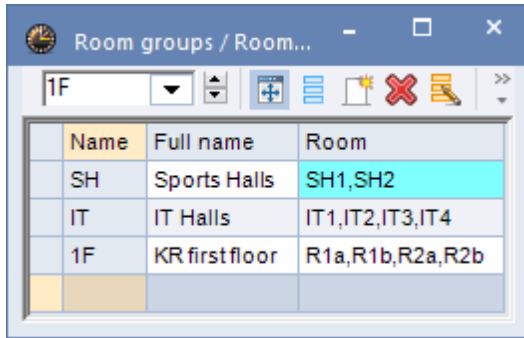
The time request -3 blocks the room completely, i.e. optimisation will not schedule lessons in room SH1 during the times specified.

5.1.5 Room groups

Untis also provides you with the possibility to create room groups.

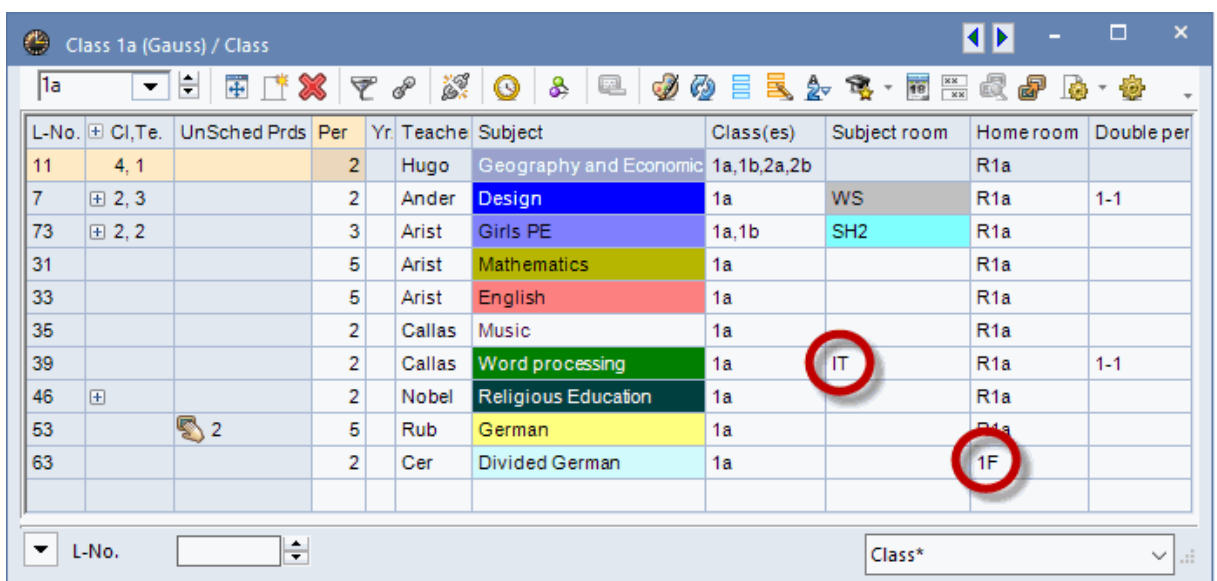


Entering the room groups is similar to entering other master data: Every room group has its own unique short name and a descriptive full name. In the 'Room' column you enter all rooms which belong to the respective room group.



Name	Full name	Room
SH	Sports Halls	SH1,SH2
IT	IT Halls	IT1,IT2,IT3,IT4
1F	KR first floor	R1a,R1b,R2a,R2b

You now can use the room groups in the lesson window 'Subject room' and 'Home room', as well as 'Rooms'.



L-No.	Cl,Te	UnSched Prds	Per	Yr	Teache	Subject	Class(es)	Subject room	Home room	Double per
11	4, 1		2	Hugo	Geography and Economic	1a,1b,2a,2b			R1a	
7	2, 3		2	Ander	Design	1a	WS		R1a	1-1
73	2, 2		3	Arist	Girls PE	1a,1b	SH2		R1a	
31			5	Arist	Mathematics	1a			R1a	
33			5	Arist	English	1a			R1a	
35			2	Callas	Music	1a			R1a	
39			2	Callas	Word processing	1a	IT		R1a	1-1
46			2	Nobel	Religious Education	1a			R1a	
53		2	5	Rub	German	1a			R1a	
63			2	Cer	Divided German	1a			1F	

In the aforementioned example, optimisation will allocate one of the rooms belonging to the room group 'IT' to the 'Word processing' lesson. The divided German lesson will be scheduled in one of the rooms of group 1S.

5.2 Classes

You can enter classes in the same way as you enter rooms.

A unique (short) name must also be given to each class. You can change the short name by double clicking on it. All other data can be changed by clicking on the relevant field in the grid.

Differentiated time requests

You can use the time requests +2 to -2 for lessons which may in principle be scheduled at any time but for which you wish to set preferences. The time request for class 1b can be explained as follows:

Lessons must take place between the first and fourth periods at all costs. Lessons should be held in the fifth and sixth periods but preferably not in seventh period. There should be no lesson in the eighth period and there must be no lessons scheduled in the ninth and tenth periods. You can adjust to what degree the time requests (+3 to -2) will be taken into account during automatic scheduling compared to other input (please refer to chapter [Weighting](#)).

The screenshot shows a software window titled "Time requests / Class" for "Class 1a (Gauss)". It contains a grid with columns for periods 1 through 10 and rows for days of the week. The time request values are as follows:

	1	2	3	4	5	6	7	8	9	10	Days	a.m.	p.m.
Monday	+3	+3	+3	+3	+1	+1	-1	-2	-3	-3			
Tuesday	+3	+3	+3	+3	+1	+1	-1	-2	-3	-3			
Wednesday	+3	+3	+3	+3	+1	+1	-1	-2	-3	-3			
Thursday	+3	+3	+3	+3	+1	+1	-1	-2	-3	-3			
Friday	+3	+3	+3	+3	+1	+1							

Below the grid is a section for "Additional unspecific time requests" with a table structure:

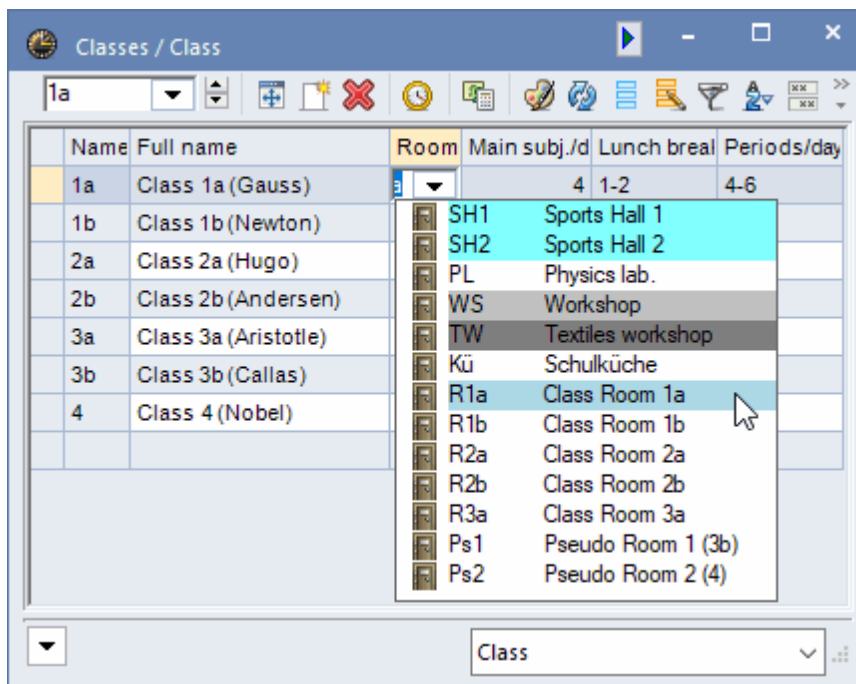
Range	Number	Time request
*		

Note: Time request -3

A time request of -3 is equal to an absolute block and therefore does not require any further weighting.

5.2.2 Class room

Class room You can enter the (short) name of a room for those classes which have their own room. If you start typing a name in a field, the auto-complete function will display the first matching element. You can accept it with <Enter> or <TAB>. You can also use the selection list to choose a room from all specified rooms.



5.3 Teachers

Teachers also need a unique short name and, optionally, a full name. This is usually the teacher's last name but can also contain the first and last name.

There are a large number of fields that you can enter for teachers. You should start with the [NTPs](#) (non-teaching periods), the [desired number of periods per day](#) and [time requests](#).

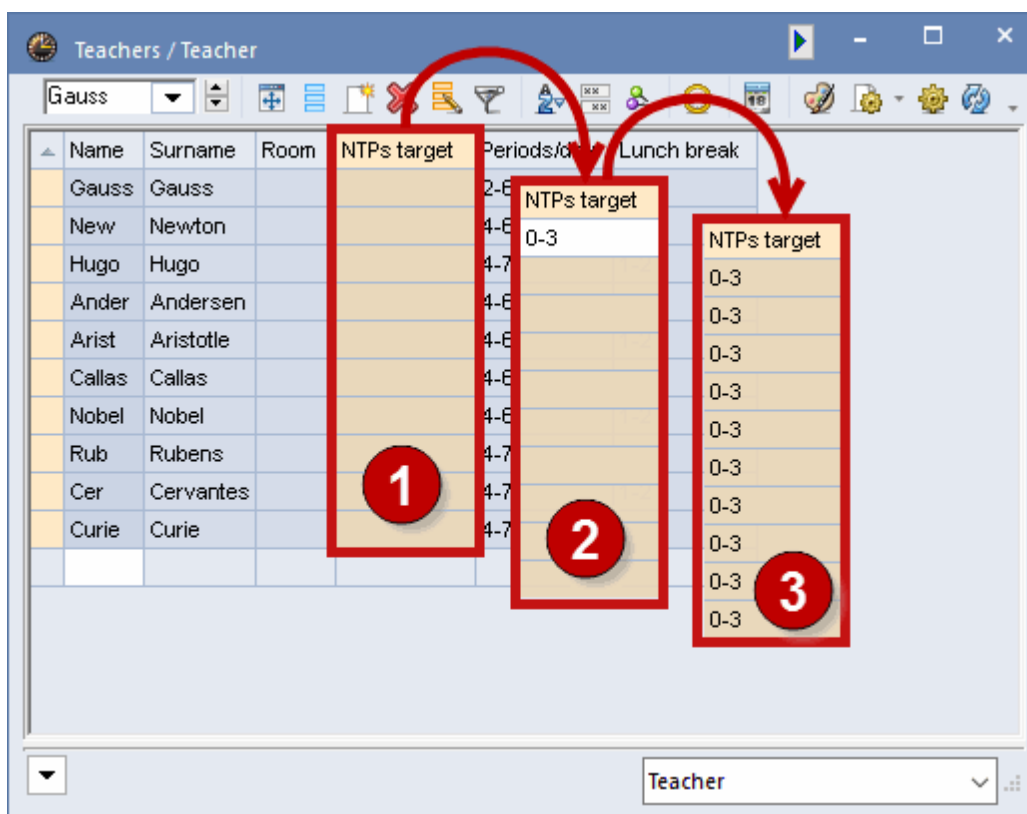
5.3.1 Non-teaching periods (NTPs)

Specify the number (range) of non-teaching periods allowed for a teacher per week in the "NTP" column. An entry of 0-1 means that the teacher may have no, or only one, non-teaching period per week. An entry of 1-3 would mean that the teacher should have at least one and a maximum of three NTPs per week.

Tipp: Serial changes

You can change more than one row in a column with just one entry. For example, you wish to change the minimum and maximum number of NTPs for several teachers:
Select the teachers for whom you wish to make an entry by selecting them while holding the left mouse key pressed.

1. Enter the desired value and confirm with <Enter> or <TAB>.
2. All selected fields now show the entered value.



5.3.2 Periods per day

Enter the minimum and maximum number of teaching periods per day for each teacher in the field "Periods/day". An entry of 3-7 would mean that the teacher should teach at least 3 but no more than 7 periods per day.

5.3.3 Time requests for teachers

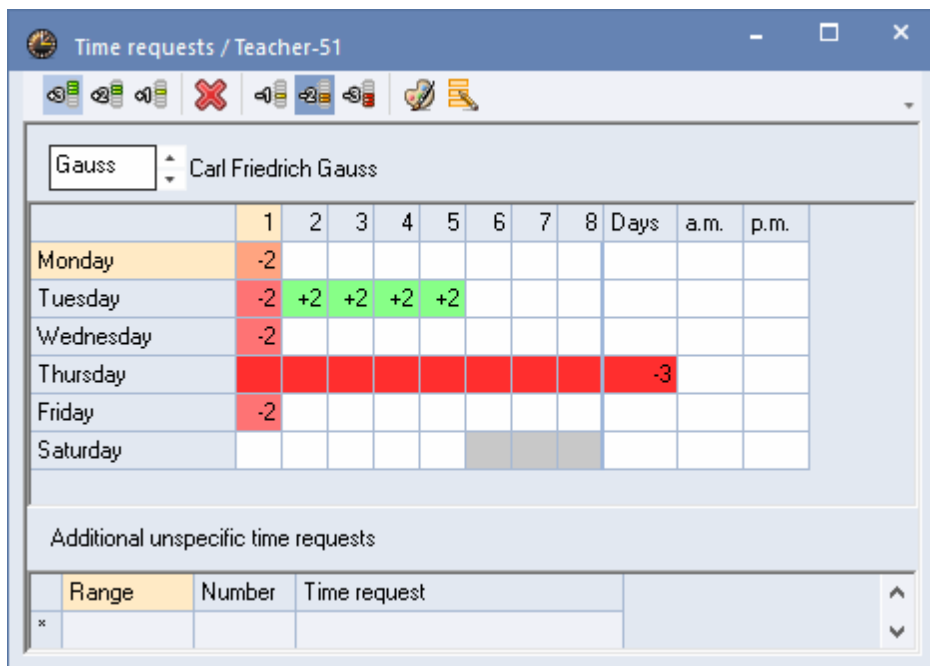
In most cases, teacher's' time requests are of particular importance. Untis therefore permits lessons to be scheduled in a way that takes individual teachers' wishes and needs into consideration.

First select a specific teacher by clicking in the corresponding row of the grid view under 'Master data | Teachers' and then click on the <Time requests> button. The time request window will now be displayed for input.

Specific time requests

Use the upper section of the time requests window to enter time requests for specific days and periods.

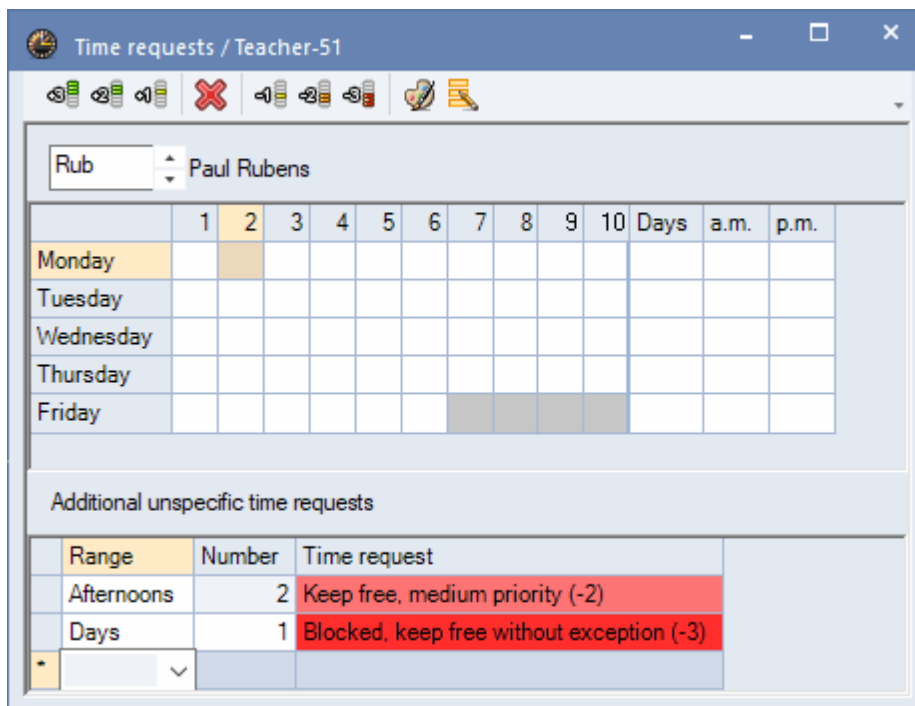
In the example teacher Gauss would 'rather like to' teach on Tuesdays, 2nd – 5th periods, whereas he would 'rather not' teach in the first period each day. Thursday is teacher Gauss' day off.



Unspecified time requests

It is also possible to enter unspecified time requests in the lower section of the window. You can accept a teacher's request for a day off on any day of the week by selecting 'Days' in the column 'Time range', '1' in the column 'Number' and 'Unconditional blocking' in the column 'Time request' You can also formulate time requests for half days (mornings or afternoons) in the same way.

Teacher „Rub“ in the example should be granted a day off during the week as well as two free afternoons if possible.



Warning:


Unspecified time requests apply in addition to specific time requests, i.e. they are cumulative. For example, if Monday is blocked and there is an unspecified request for a day off, a total of two days are to be kept free.

Tip: Unspecified time requests

You should use unspecified time requests whenever possible. If a teacher needs a day off, for example, Untis will then determine the day (or half-day) to be kept free based on the specifics of the timetable. This avoids placing unnecessary restrictions on optimisation and allows timetables to be better calculated.

5.4 Subjects

You can enter subjects just like any of the other master data elements described above. You should first allocate subject rooms before making any further entries. When you create lessons with this subject, the subject room will be entered automatically. This helps save time when entering lessons.

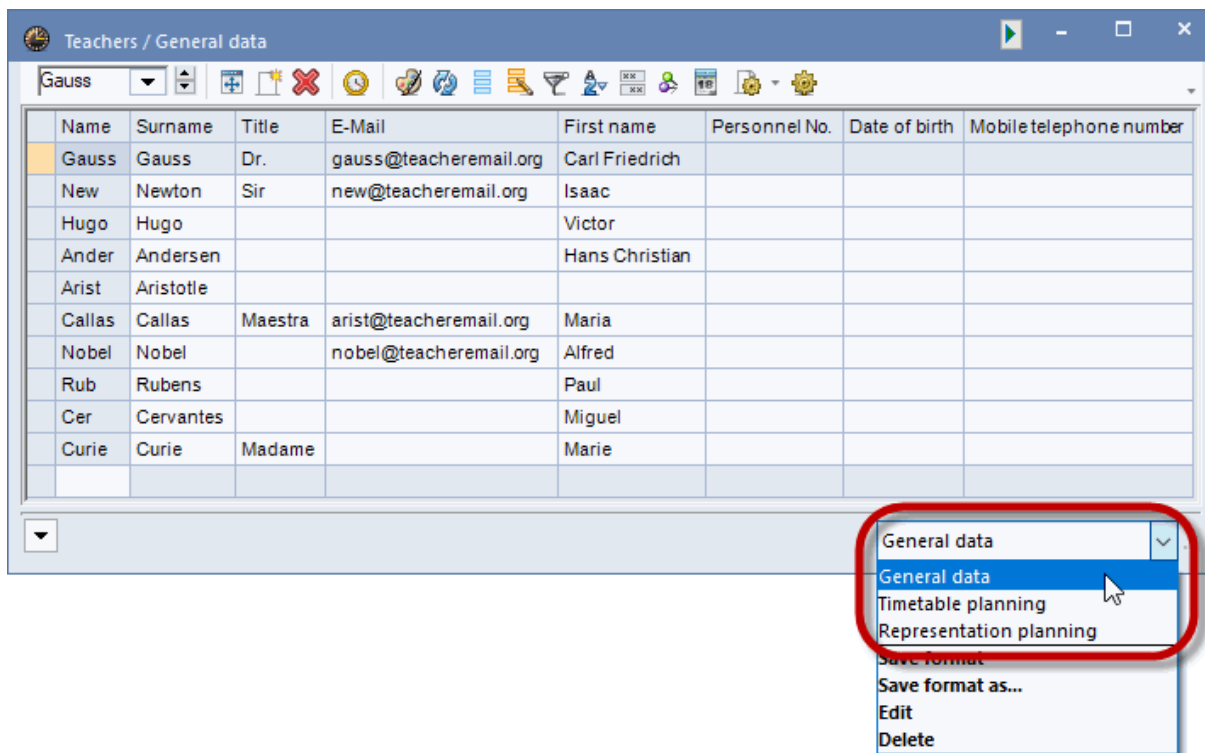
Tip: Complete display 

Part of your data display may not be visible when you switch from one master data element to another (e.g. from classes to subjects) due to entries with different lengths and displayed columns. In this case, simply click on the <Complete display> button and the window will be resized to its optimum size.

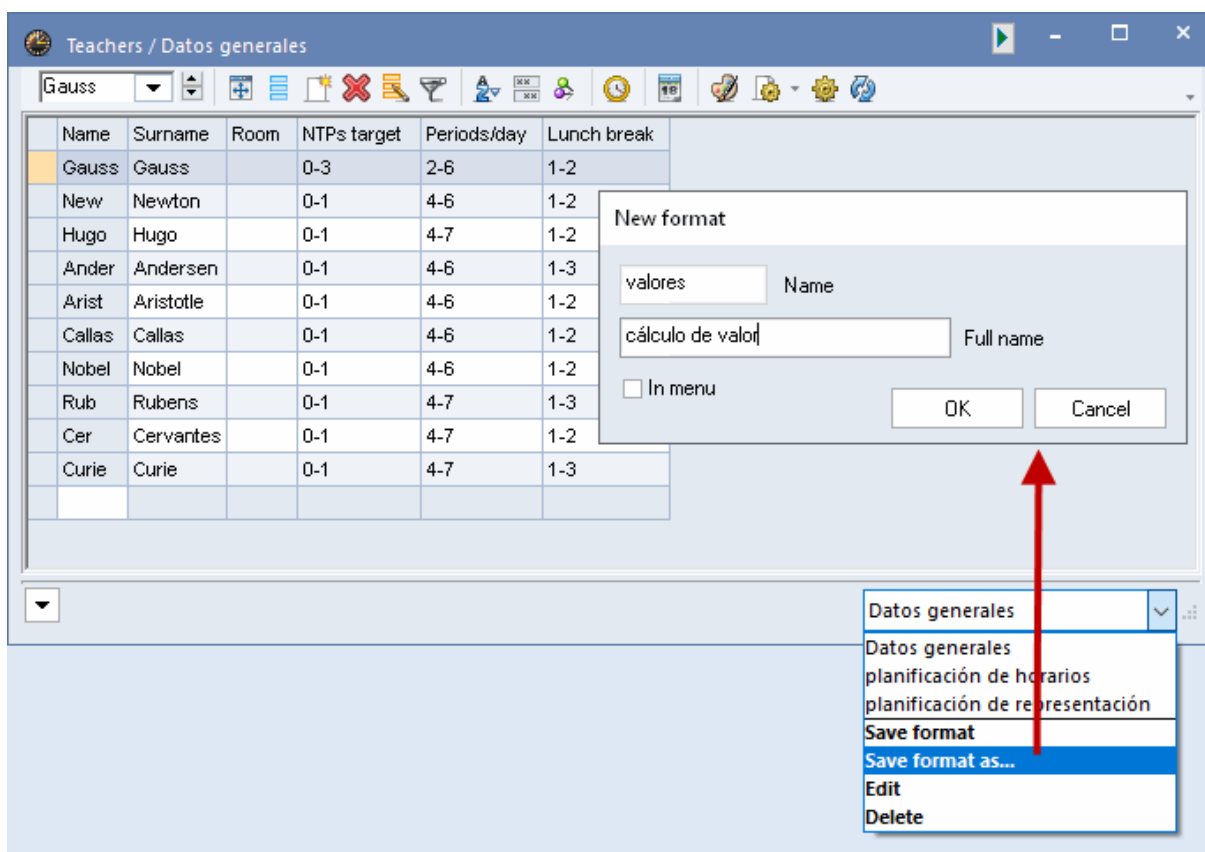
5.5 Views

Untis is often used to accomplish different tasks. Accordingly there are input fields in the master data for different tasks. You can use the option of creating a dedicated view for each task area. You can use the selection list at the bottom right of the master data window to switch between views that have been defined.

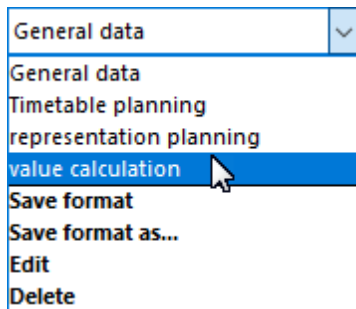
The figure shows that three views have been stored teacher master data: one with general data such as title, first name and staff number, one for the scheduler and one for the cover planner.



When you display or hide a column in a view, a * will be added to the name of the view in the selection list indicating that the view has been modified. You can now save the view with 'Save view', or with 'Save view as. ...' under a new name thus creating a new view.



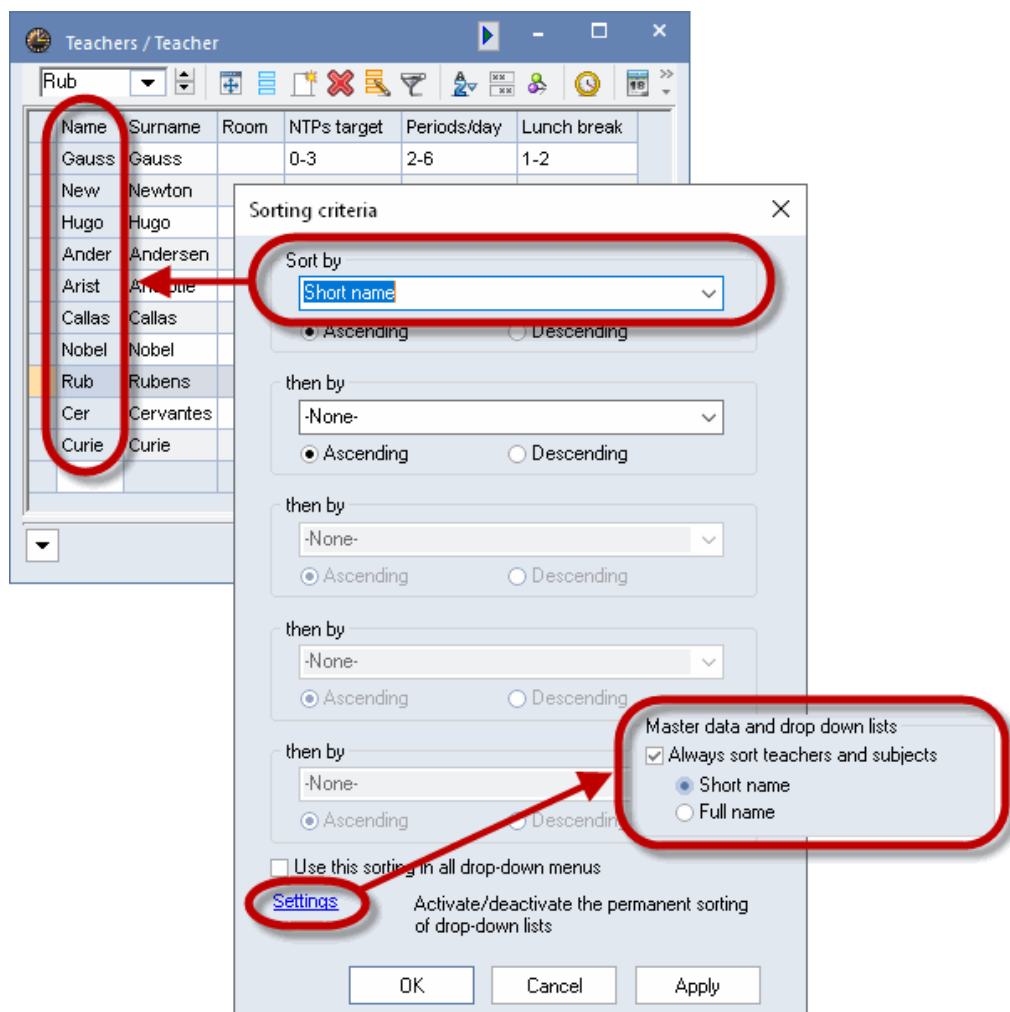
The new view will then be available for use in the selection list.



5.6 Sorting

When you enter master data they will by default be displayed in all selection lists (e.g. when entering [lessons](#)) in the order in which they were entered. The teachers' and subjects' master data are automatically sorted in alphabetical order. You can change the sort order for individual [views](#) as well as for all selection lists.

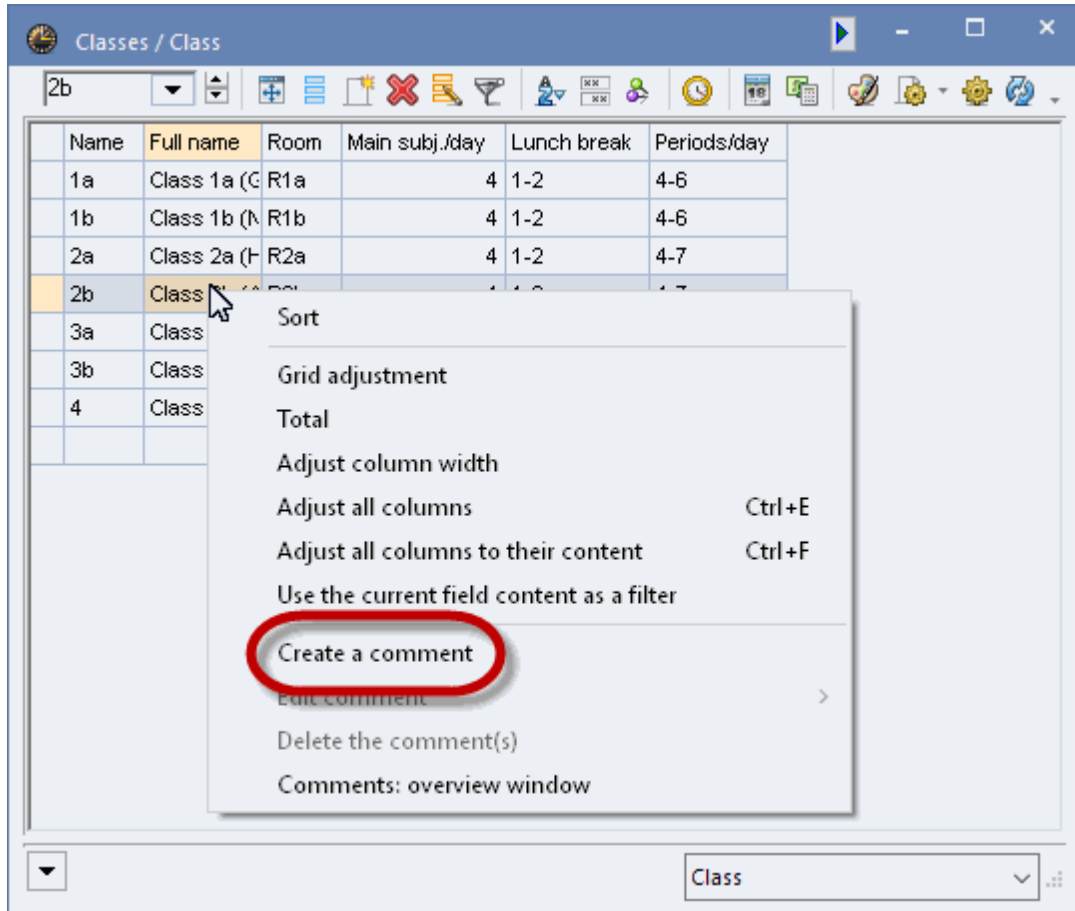
To do this click on the <Sort> button in the master data window. You can define the rules for sorting the elements in the 'Sort criteria' dialogue. The example shows teacher master data sorted in ascending order by (short) name. Wherever teaches are listed in the application, they are to be displayed in this sort order.



5.7 Comments

Comments provides you with the opportunity to add notes to certain fields in almost all areas of the program.

Click right on the respective field and select <Create comment> from the context menu.



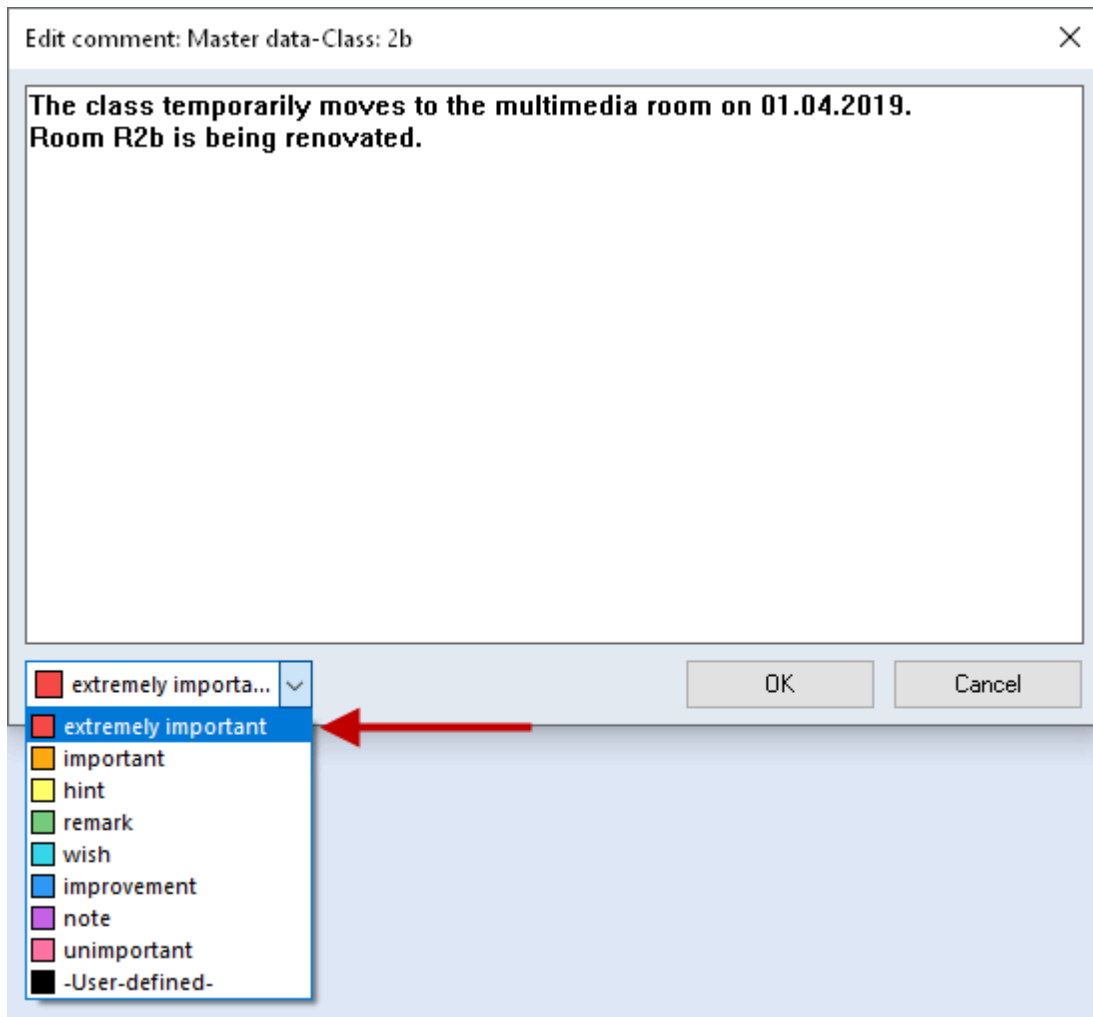
The screenshot shows a window titled "Classes / Class" with a table of class data. The table has columns: Name, Full name, Room, Main subj./day, Lunch break, and Periods/day. The row for "2b" is selected. A context menu is open over this row, listing various actions. The "Create a comment" option is circled in red.

Name	Full name	Room	Main subj./day	Lunch break	Periods/day
1a	Class 1a (C	R1a	4	1-2	4-6
1b	Class 1b (M	R1b	4	1-2	4-6
2a	Class 2a (T	R2a	4	1-2	4-7
2b	Class				
3a	Class				
3b	Class				
4	Class				

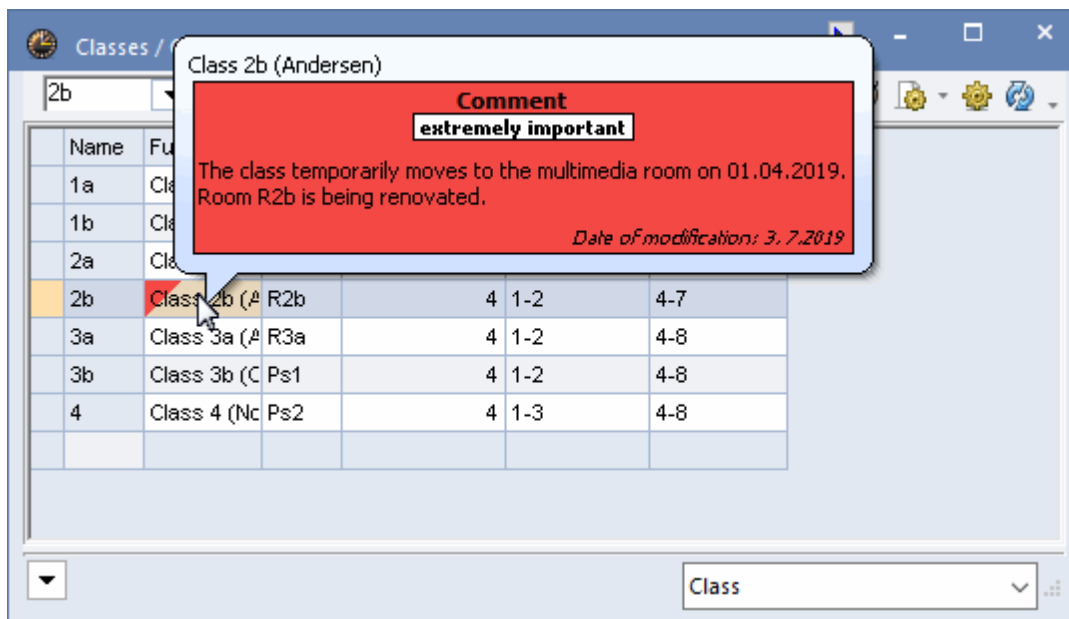
Context menu options:

- Sort
- Grid adjustment
- Total
- Adjust column width
- Adjust all columns Ctrl+E
- Adjust all columns to their content Ctrl+F
- Use the current field content as a filter
- Create a comment**
- Exit comment >
- Delete the comment(s)
- Comments: overview window

You can categorise the comments by colours, and can give a certain weight or importance to different colours. In this example, red means 'very important'.



The field you added a comment to will be marked with a triangle of the colour of the respective category. When running the mouse over the coloured triangle, a tooltip shows the details to your comment. You can also add several comments to one field, and different comments can be added to one element in different fields.



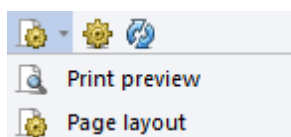
Just open the context menu for an overview of all comments in the comment overview window. Alternatively, you can open the comment overview window from the Ribbon (on the 'Data' tab).

5.8 Printing master data

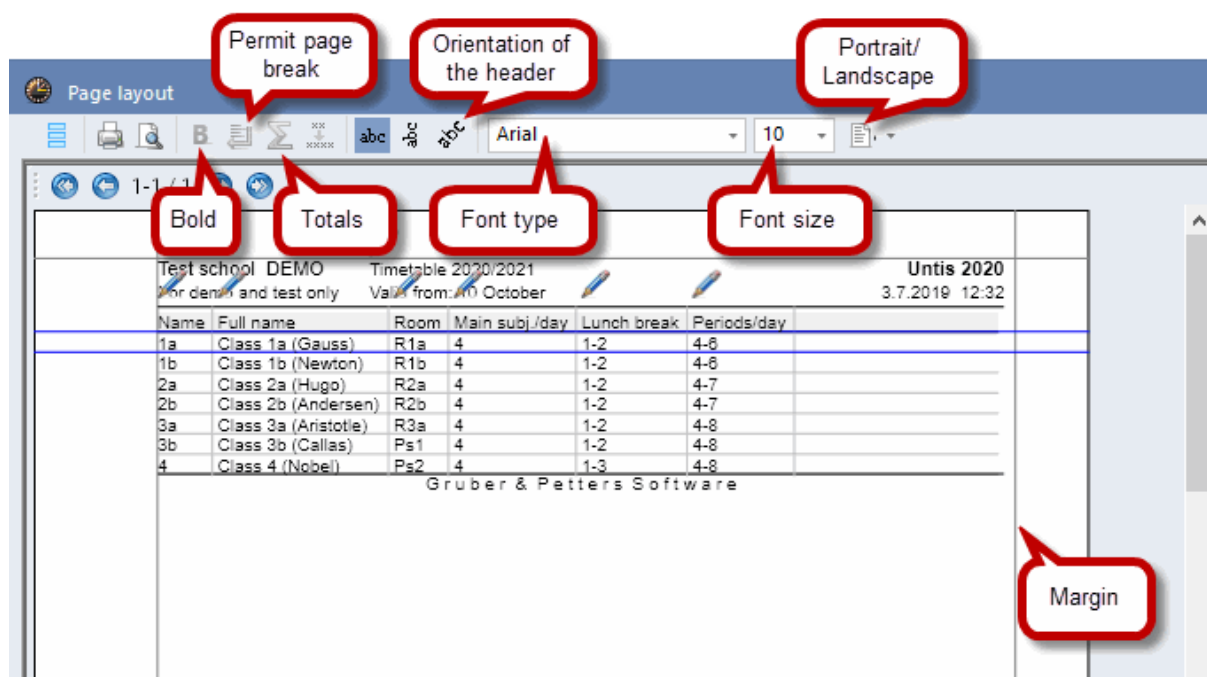
As a general rule, all fields that are visible in the grid view will be printed. You can print master data by clicking on the buttons <Print> or <Print preview>. You can then select the elements you wish to print in the print selection dialogue, if you wish.

Customising the printout

You can influence the appearance of printed reports by clicking on <Print layout> in the main toolbar.



A window will open allowing you to make all the settings for the report in question. The figure shows that a totals row will be shown, for instance, for the teachers' value units.



Please note that you can change the labels in the heading fields by clicking on the button indicating a pen.

Once master data have been entered and their most important characteristics specified, [lessons](#) can be entered for all classes and teachers.

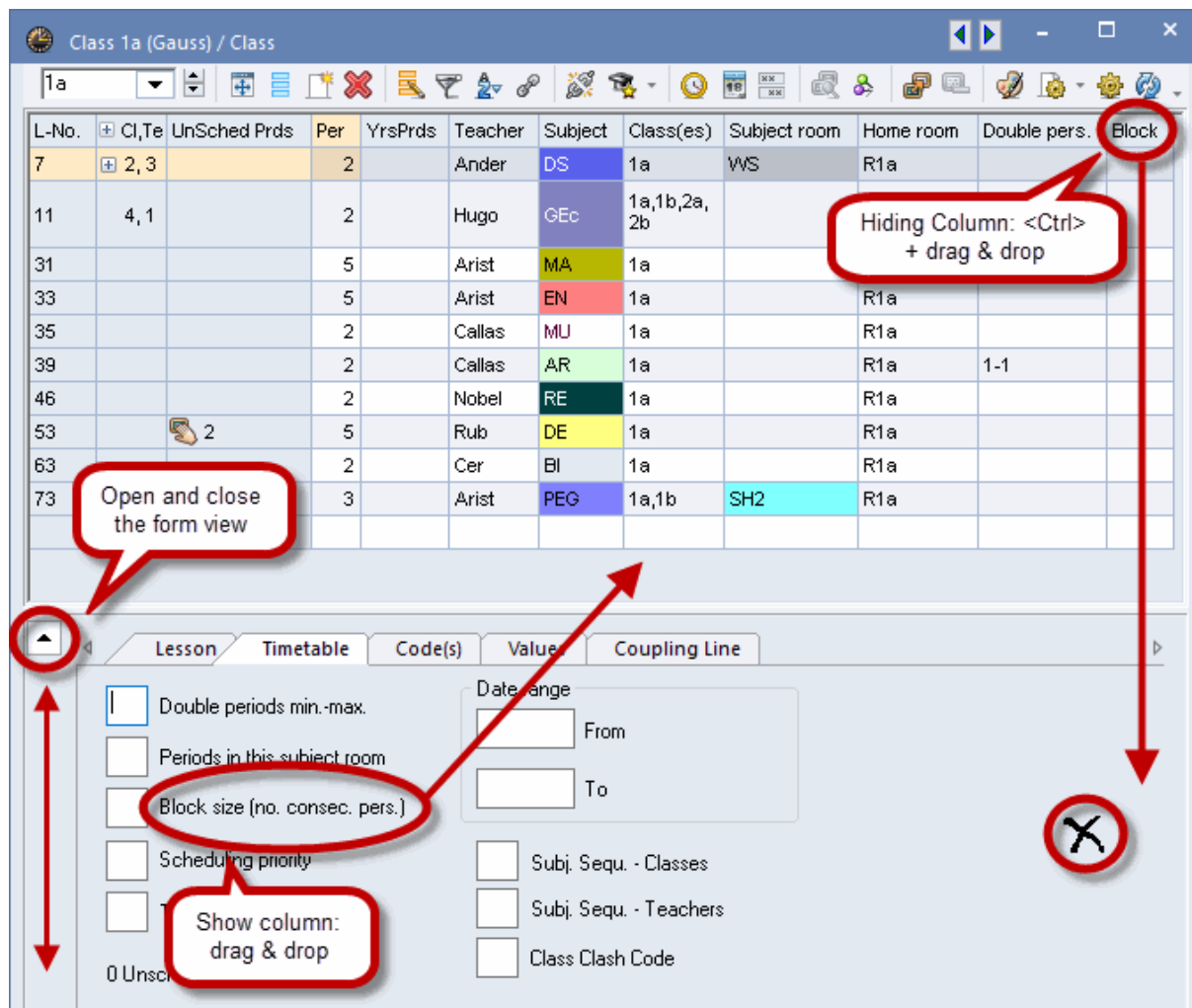
6 Lessons

Lessons can be entered from the perspective of classes, teachers or subjects. You can access the various windows by clicking on the menu points 'Classes', 'Teachers' or 'Subjects'. In the examples below we will be defining lessons from the perspective of classes.

Open the window 'Classes | Lessons'. You can either use your own school data or use the file demo.gpn.

6.1 The lessons window

As with the [master data windows](#) the lessons window is also divided into two sections: the grid view, which lists the lessons in a table, and the form view, containing all the fields that can be entered for a lesson. You can use the arrow button at the bottom left of the screen to expand and collapse the form view.



The most important fields are shown in the grid view by default. If you wish to display a field, use drag & drop to pull it from the form view into the grid view. Hold the <CTRL> key pressed and drag a field from the grid view into the form view if you wish to hide it.

In the form view you can enter all possible data as masks. All entries made here are immediately displayed in the grid view, and vice versa.

6.2 Entering lessons

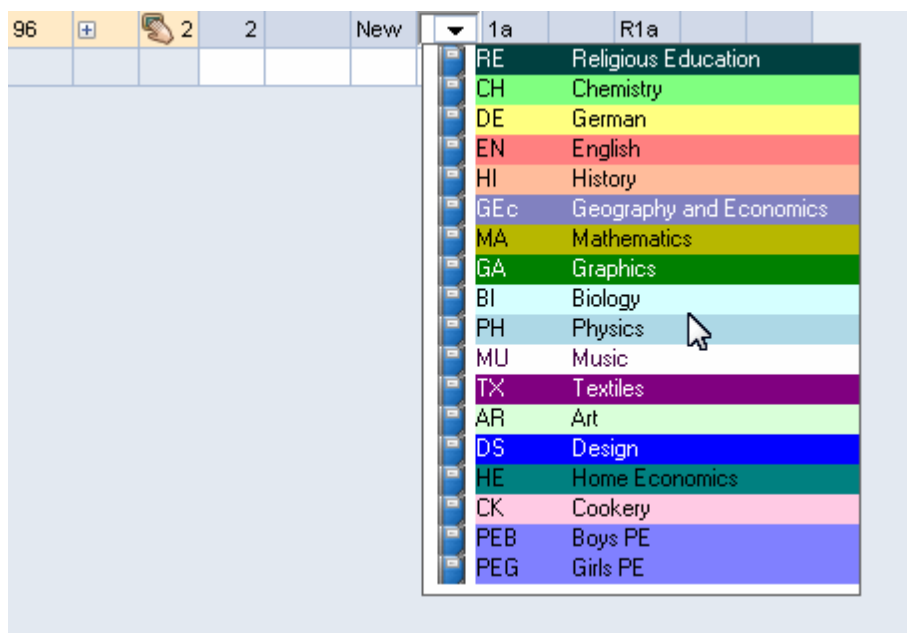
6.2.1 Simple lessons

Simple lessons are those in which one teacher teaches one class in one subject. This may be, for example, 2 periods of physics per week in class 1A with teacher Newton in the physics lab.:

Periods	Teacher	Subject	Class	Room
2	New	Ph	1a	Phys

1. Open the window "Lessons | Classes". You will see the lessons of the first class.
2. Place the cursor in the last (i.e. empty) row in order to enter a new lesson.
3. Enter '2' in the column "Per" (periods) and confirm your entry by pressing <TAB>.
4. Enter the name "New" and again confirm with <TAB>. Note that the [auto-complete](#) function (as described above) also works in this window.

5. Enter the subject "Ph". Alternatively, you can choose the names from a drop-down list.

**Note: Sorting**

The subjects are displayed according to the [sort order](#) defined.

6. The name of class 1a appears automatically because we are currently working in the lessons window of class 1a.
7. The home room for this lesson is taken automatically from the class' or teacher's master data. Since according to "Subjects | Master data" the subject physics should always be held in the physics lab, it has automatically been copied to the subject room column.

L-No.	Cl,Te	UnSched Prds	Per	YrsPrds	Teacher	Subject	Class(es)	Subject room	Home room	Double pers.	Block
7	+ 2, 3		2		Ander	DS	1a	WS	R1a	1-1	
11	4, 1		2		Hugo	GEc	1a,1b,2a,2b		R1a		
31			5		Arist	MA	1a		R1a		
33			5		Arist	EN	1a		R1a		
35			2		Callas	MU	1a		R1a		
39			2		Callas	AR	1a		R1a	1-1	
46			2		Nobel	RE	1a		R1a		
53		2	5		Rub	DE	1a		R1a		
63			2		Cer	BI	1a		R1a		
73	+ 2, 2		3		Arist	PEG	1a,1b	SH2	R1a		
96		2	2		New	PH	1a	PL	R1a		

Now open the window "Teachers | Lessons" and go to the lessons of teacher Newton. You can see that the newly created lesson is also listed among Newton's lessons.

6.2.2 Coupled lessons

In Untis terminology, coupled lessons (or couplings) are those in which more than one teacher and/or more than one class participate in the lessons, and the lessons in the coupling are held at the same time.

Coupled lessons (several classes)

Teacher Rubens is to teach cookery in the home economics room to the combined students of classes 1a and 1b for 2 periods per week.

Per	Teacher	Subject Class Room	2	Rub
CK	1a,1b	HE1		

Proceed as in the example of the simple lesson, but enter both classes 1a and 1b in the field 'Class(es)' separated by a comma. In this case, the room will not be entered automatically because there is no room assigned to the subject cookery. For this reason, enter it in the subject room column .

L-No.	Cl,Te	UnSched Prds	Per	YrsPrds	Teacher	Subject	Class(es)	Subject room	Home room	Double pers.	Block
7	2, 3		2		Ander	DS	1a	WS	R1a	1-1	
11	4, 1		2		Hugo	GEc	1a,1b,2a,2b		R1a		
31			5		Arist	MA	1a		R1a		
33			5		Arist	EN	1a		R1a		
35			2		Callas	MU	1a		R1a		
39			2		Callas	AR	1a		R1a	1-1	
46			2		Nobel	RE	1a		R1a		
53		2	5		Rub	DE	1a		R1a		
63			2		Cer	BI	1a		R1a		
73	2, 2		3		Arist	PEG	1a,1b	SH2	R1a		
96		2	2		New	PH	1a	PL	R1a		
97	2, 1	2	2		Rub	CK	1a,1b		R1a		

Now switch to class 1b. You can see that the newly created lesson also appears in the list of lessons of class 1b.

Couplings with several classes and teachers

We will now plan 4 periods of English in different sets for the students of the second year. This means that students from classes 2a and 2b will be taught in three sets by three teachers (Cer, Ander and Callas) in three different rooms.

Per	Teacher	Subject	Class	Room
4	Cer	EN	2a,2b	R2a
4	Ander	EN	2a,2b	R2b
4	Callas	EN	2a,2b	PS1

1. Select class 2a in the lessons window.
2. Enter "4" in the column "Per" and confirm your entry by pressing <TAB>.
3. Enter the name "Cer" and confirm once more with <TAB>. The order in which you enter the teachers' names is not important.
4. Enter the subject EN.
5. Enter classes 2a and 2b (separated by a comma) in the field class(es) column.
6. The class 2a's home room, R2a, will be automatically copied into the relevant field.
7. Move the mouse to the column 'Cl,Te' in the lesson you have just entered and click on '+'. Enter the name of the next teacher, "Ander", and again classes 2a and 2b in the empty row shaded blue.

95			2		New	PH	2a	PL	R2a		
98	+ 2, 1	4	4		Cer	DE	2a,2b		R2a		

95			2		New	PH	2a	PL	R2a		
98	- 2, 1	4	4		Cer	DE	2a,2b		R2a		

8. Now change room R2a to R2b because Cervantes will be teaching his group in R2a.
9. Repeat the entries for teacher Callas in the third coupling row, using a different room.

Class 2a (Hugo) / Class

L-No.	+ Cl,Te	UnSched	Prds	Per	YrsPrds	Teacher	Subject	Class(es)	Subject room	Home room	Double pers.	Block
6	+ 3, 7			1		Callas	CH	2a,2b,3a		R2a		
11	4, 1			2		Hugo	GEc	1a,1b,2a,2b		R1a		
18				2		Hugo	HI	2a		R2a		
38				1		Callas	MU	2a		R2a		
41				2		Callas	AR	2a		R2a	1-1	
48				2		Nobel	RE	2a		R2a		
59				4		Cer	DE	2a		R2a		
60				4		Cer	EN	2a		R2a		
65				2		Cer	BI	2a		R2a		
75				2		Rub	PEB	2b,2a	SH1	R2b		
81				2		Curie	TX	2b,2a	TVV	R2b	1-1	
90				2		New	MA	2a		R2a		
94				2		New	GA	2a,2b		R2a		
95				2		New	PH	2a	PL	R2a		
98	+ 2, 3	4	4			Cer	DE	2a,2b		R2a		
						Ander	DE	2a,2b		R2b		
						Callas	DE	2a,2b		Ps1		

A couple lesson consisting of two classes and three teachers.

The '+' sign will now be permanently displayed in the 'Cl,Te' column. Clicking on this sign will display all the information on the lesson. You can decide whether you wish to view only the first row of the lesson or whether all coupling rows should be displayed.

Tip: Expanding all coupling rows
 Clicking on <+> in the column heading of 'Cl,Te' will expand or collapse all coupling rows in one go.

Tip: You should remember the following rule when entering coupled lessons:
 Several classes are entered together separated by commas but when there are several teachers each one must be entered in a separate coupling row.

6.2.3 Double periods

Lessons will be scheduled in single periods unless specified otherwise. You have to allow or request double periods in the field "Double pers." of each lesson concerned. Use this field to specify the permitted range of double periods:

An entry of 1-1 indicates that the range is from 1 to 1, i.e. the lesson should be scheduled in exactly one double period.

L-No.	± Cl,Te.	UnSched Prds	Per	YrsPrds	Teacher	Subject	Class(es)	Subject room	Home room	Double pers.	Block
7	± 2, 3		2		Gauss	DS	1b	WS	R1a	1-1	

An entry of 0-1 means that a 2-period lesson can be scheduled in a double period, but it is not an absolute requirement (minimum 0, maximum 1 double period).

L-No.	± Cl,Te.	UnSched Prds	Per	YrsPrds	Teacher	Subject	Class(es)	Subject room	Home room	Double pers.	Block
3	± 1, 2		2		Gauss	GA	3a		R3a	0-1	

An entry of 1-2 means that a 4-period lesson can also be scheduled in one double period or two double periods. The timetable algorithm should decide which variant is best suited from the overall timetable perspective.

L-No.	± Cl,Te.	UnSched Prds	Per	YrsPrds	Teacher	Subject	Class(es)	Subject room	Home room	Double pers.	Block
76	± 2, 2		3		Arist	PEG	3a,3b	SH2	R3a	1-2	

Tip: Double-period condition
 If it is possible to allow variability in scheduling double periods (e.g. with the 0-1 or 1-2 options), please allow the algorithm to work with these freedoms since this can lead to a significantly better overall result.

6.2.4 Blocks

More than 2 periods scheduled consecutively are called a block of periods.

If you wish, for example, to schedule 3 periods consecutively, enter '3' in the column 'Block'.

L-No.	Cl,Te.	UnSched Prds	Per	YrsPrds	Teacher	Subject	Class(es)	Subject room	Home	Double pers	Block
2			3		Callas	AR	1b		R1b		3

If you wish to schedule a 6-period lesson in two blocks of 3, simply enter '3.3'.

L-No.	Cl,Te.	UnSched Prds	Per	YrsPrds	Teacher	Subject	Class(es)	Subject room	Home	Double pers	Block
30		1	6		Arist	MA	1b		R1b		3,3

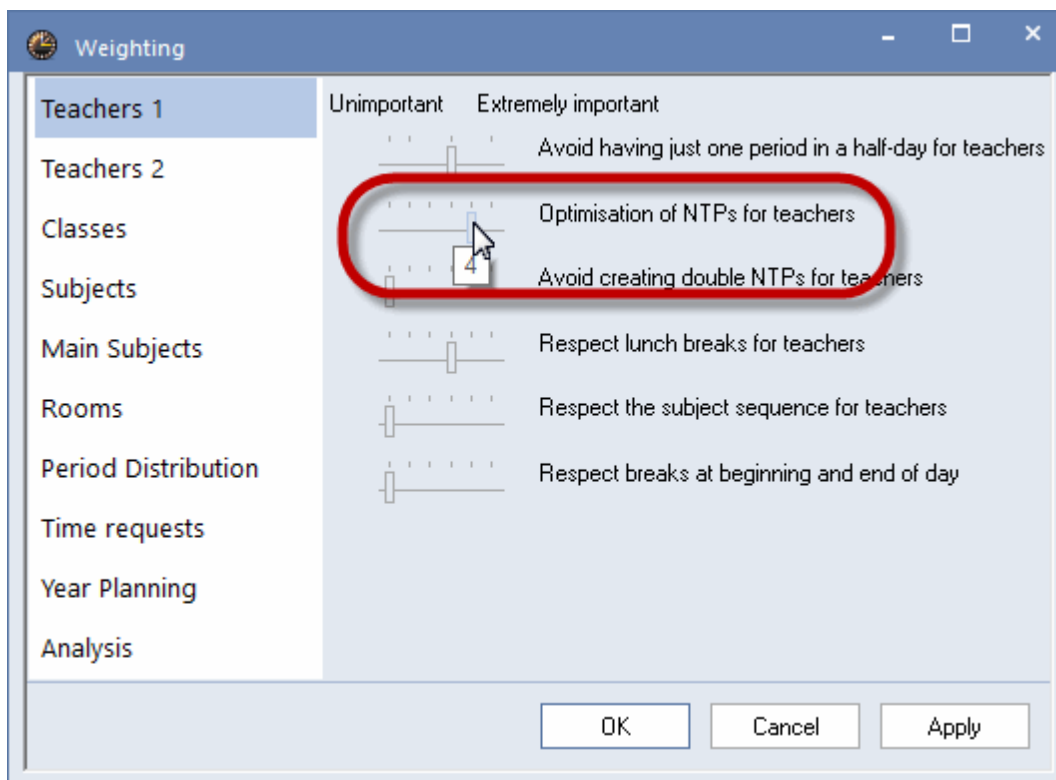
7 Automatic scheduling

You must specify the general conditions and your priorities for the timetable before you can start automatic scheduling. This is done in the relevant window which can be accessed via the 'Weighting' button.

7.1 Weighting

Use these control data to determine the priorities for your school's timetable. This is done by allocating weighting values ranging from unimportant (0) to extremely important (5).

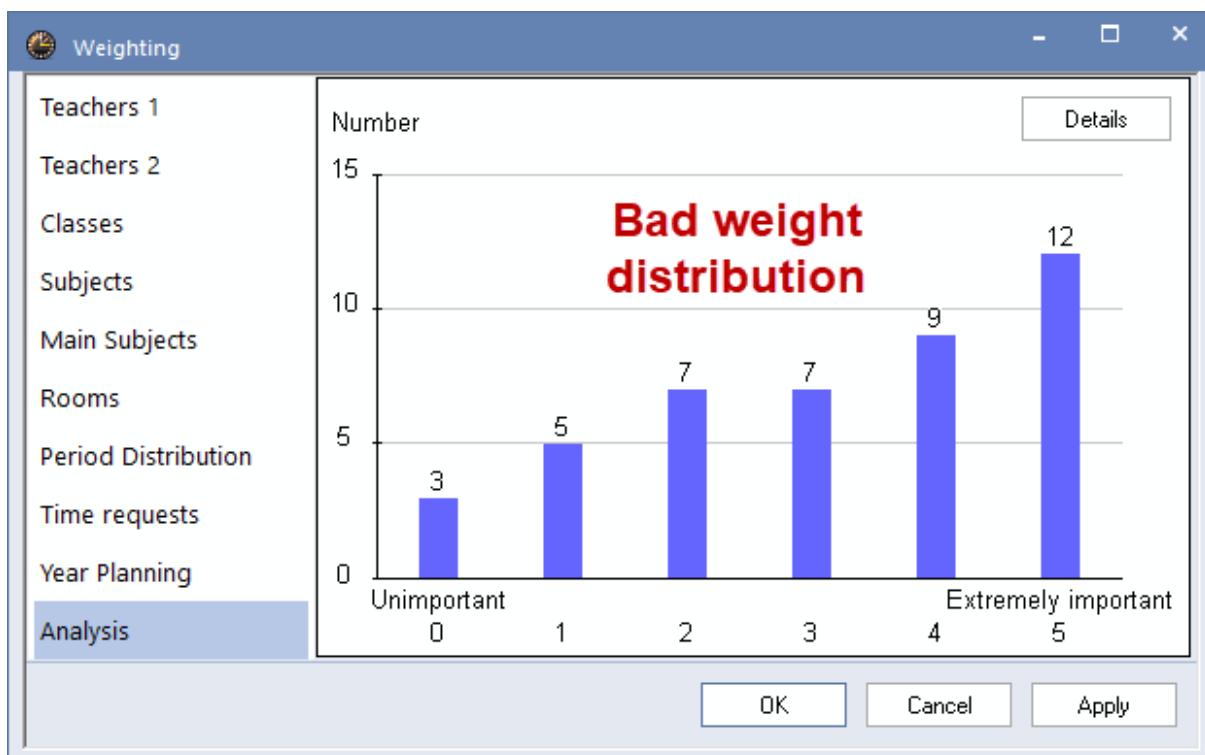
Example: If the entered condition is important for observing teachers' non-teaching periods, move the slide control 'Optimisation of free periods for teachers' to the right (e.g. to 4).

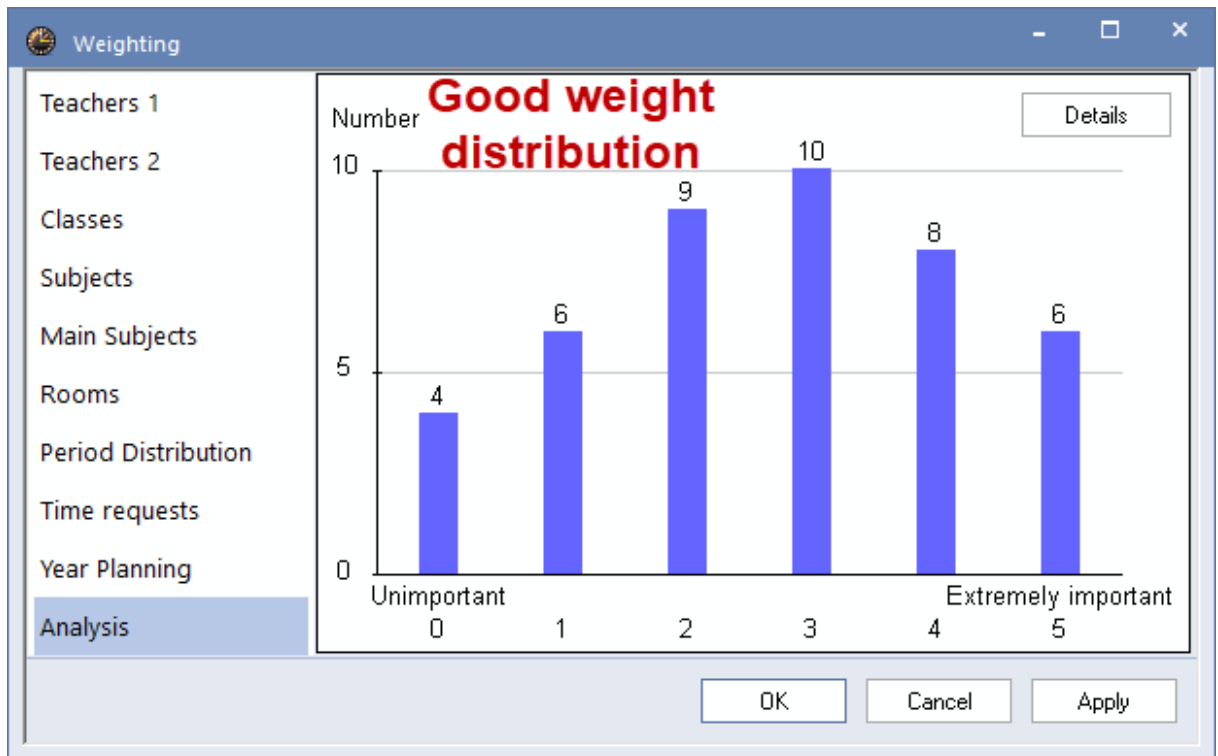


Weighting distribution

The weighting profile is important for achieving a good and well-balanced timetable. Priorities 4 and 5 should not be used too frequently. It is important that you map the requirements of your school as accurately as possible. If you are new to Untis, we recommend that you leave the weights at the default values for the moment and that you come back to them once you have gained some experience with one or more test optimisation runs.

You can view the settings for the individual weighting slide controls on the 'Analysis' tab. The general rule is that a weighting value of 4 and especially 5 should be used very sparingly. You will find an example of poor weighting allocation and an example of good weighting allocation below:





7.2 Optimisation strategies

Open the window "Control data for optimisation" by clicking on the <Optimisation> button.

Warning: Diagnosis of input data

Check your input data on possible errors or mistakes via [Diagnosis](#) before your first optimisation runs. The outcome of the optimisation primarily depends on complete and error-free data input.

You can use this window to choose between simpler (and faster) and more advanced (and slower) optimisation strategies. You can also select the number of different timetables which will be created during the optimisation run.

The optimisation variants are ordered by:

- optimisation duration (A is the shortest and E is the longest strategy)
- recommended work steps (begin with strategy A and work step by step through to the more advanced strategies)

Strategy A - fast optimisation

This is the fastest optimisation variant. It does not return the best results but is ideally suited to discovering errors in the input data. For this reason, use this strategy at the start of scheduling until major data errors in master data and lessons have been remedied.

Tip:

Errors in input data prevent good optimisation results. Work with strategy A in order to find errors with the input data under 'Diagnosis'.

Strategy B - advanced optimisation

This strategy returns very good results and does not take too long. Run this variant after running strategy A and look at the results. If necessary, adjust the weighting slide controls if the timetables do not match your expectations.

Tip: Developing weighting parameters

There is an enormous difference between weighting values of 4 and 5. A weighting value of 5 will impair the result even though a value of 4 would be sufficient. For this reason you are advised to set the slide controls to a maximum of 4 and only to change individual controls to 5 one by one if the timetables generated do not match your expectations.

Strategy D - advanced percentage planning

Strategies D or B will return the best results depending on the school. However, since strategy D takes considerably longer to run, you should not invoke it until you have developed weighting parameters using strategy B. In this variant, the algorithm proceeds step by step, i.e. does not process all lessons in one go. For this reason you must enter the start and incremental percentage value in the optimisation dialogue.

Tip: Start and incremental percentage value

We recommend a starting percentage value of 30% and incremental percentage value of 20%.

Strategy E - overnight optimisation

As the name implies, this strategy can take a long time to run, but in most cases returns the best results.

Use it at the very end of optimisation, i.e. after using the other strategies. How long this optimisation takes to run depends very much on the size of the school, the number of timetables to be computed, the optimisation steps per timetable and on how powerful the computer is that you are using. It can therefore very well take the whole night to run.

Optimisation steps per timetable (1-9)

A value between 1 (low optimisation) and 9 (advanced optimisation) is possible. You can compare the optimisation level to the settings of a chess computer which determine how long the computer may take to analyse each move.

Optimisation Run
 Optimisation strategy (A,B, ...)
 A - fast optimisation
 3 Optimisation series: No. of TTs (1-20)
 2 Optimisation level (1-9)

Launching optimisation

You can start the optimisation by clicking on the <OK> button.

7.3 Evaluating timetables

The optimisation run is the "heart" of Untis and is responsible for scheduling lessons automatically. As a general rule, each optimisation run consists of two parts, initial placement and swapping. During placement optimisation, the various lesson periods are inserted into the initially empty timetable

beginning with the most difficult lessons, and the timetable is gradually filled. The swap optimisation then attempts to switch the periods about in order to improve the result.

Optimisation is finished as soon as a blue "OK" is displayed in a yellow window. The time needed for optimisation depends on the computing power of your PC, the chosen optimisation strategy and the size of your school.

The top section of the window displays an initial rough diagnosis of benchmark values for the timetable generated during optimisation.

Evaluation number

Each violation of one of your specifications (e.g. master data or lesson entries) will be given penalty points. These points are rated according to the weighting values you specified, and this finally results in a total of penalty points for your school's timetable as an indication of the quality of the timetable. The lower the total, the fewer violations of your specifications.

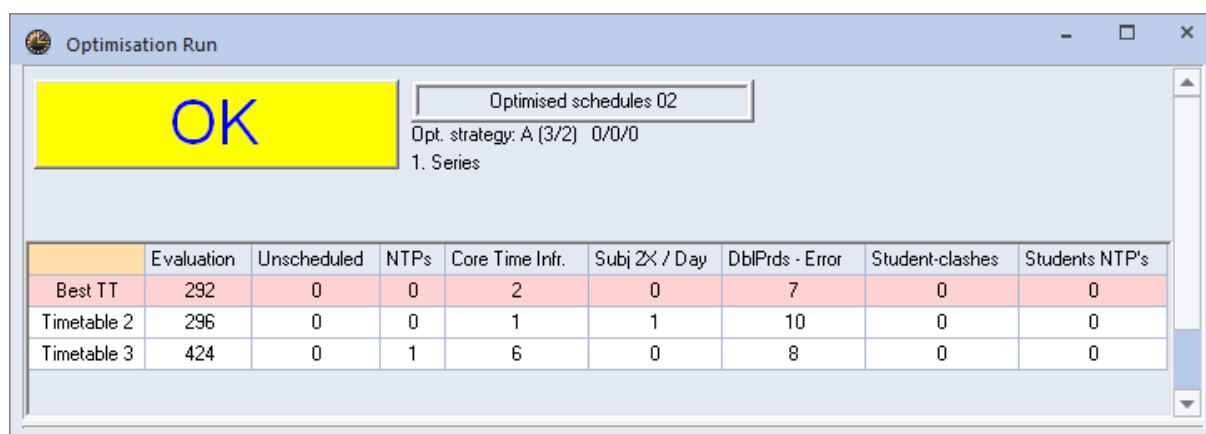
Note: Size of the evaluation number

The size of the evaluation number very much depends on the size of your school and the values that you entered. This number will also change as soon as you start modifying weighting factors or other settings. For this reason it does not make sense to compare results computed on the basis of different settings.

Unscheduled periods, NTPs, core time violations

The following items displayed after optimisation will give you an initial basic idea of the quality of the timetables:

- Number of unscheduled periods
- Non-teaching periods (for classes)
- Core time violations ([core time](#) = +3 time request for classes)
- Subject 2x / day (e.g. when a subject is scheduled in the first and fifth periods on the same day)
- Double-period errors



The screenshot shows a window titled 'Optimisation Run'. On the left, there is a yellow box with the text 'OK' in blue. On the right, there is a text box containing 'Optimised schedules: 02', 'Opt. strategy: A (3/2) 0/0/0', and '1. Series'. Below this is a table with the following data:

	Evaluation	Unscheduled	NTPs	Core Time Infr.	Subj 2x / Day	DbIPrds - Error	Student-clashes	Students NTP's
Best TT	292	0	0	2	0	7	0	0
Timetable 2	296	0	0	1	1	10	0	0
Timetable 3	424	0	1	6	0	8	0	0

[Specially designed tools](#) allow you to diagnose the timetable in greater detail.

7.4 Timetable diagnosis

Go to <Diagnosis> and access the window which will assess your input data and the calculated timetable.

The Timetable diagnosis window consists of two sections: on the left you will see the diagnosis selection

window and on the right the diagnosis details window. You will see two tabs in the selection window: Input data and Timetable.

You can choose a diagnostic item in the selection pane, and the details pane will display the lesson in question together with the affected class and/or teacher.

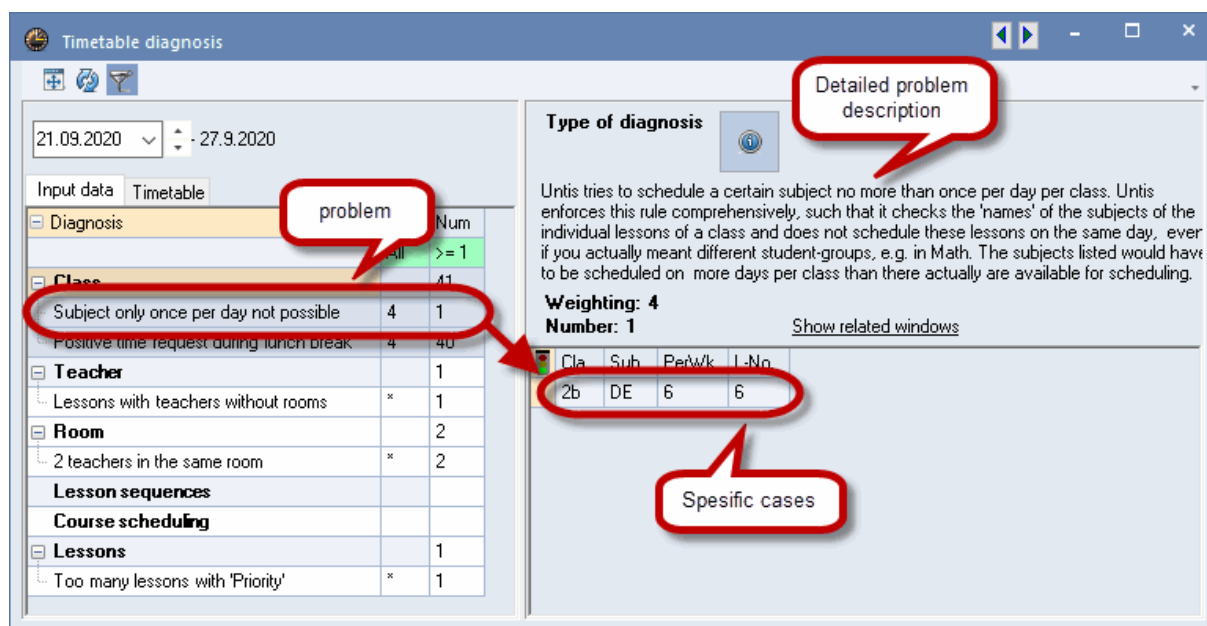
Diagnosis Input data

This is where issues and problems with the input data are displayed.

Note: Diagnosing input data

The 'Input data' tab checks data for consistency and indicates any inconsistencies that could cause problems when the timetable is created. Please make sure to check this item before running optimisation.

For example, 6 periods of English have been specified for class 2b in the demo.gpn file and these should be scheduled as single periods. Since English teacher Callas has one day off each week it is theoretically impossible for these lessons to be scheduled without violating a condition (e.g. double-period condition or subject held only once per day). The diagnosis will indicate under item 'Input Data | Class' that in one case the problem 'Subject 1x/day not possible' occurs. The right window section displays the lesson that is involved, namely subject EN for class 2b (lesson no. 6).



Diagnosis Timetable

Items of this section indicate violations that occurred when the timetable was created, either from the perspective of the lesson involved or from the perspective of the master data element affected.

The following example shows that eight teachers have been allocated too few teaching periods each day (according to the master data). For example, teacher Hugo has only one teaching period on Friday compared with a minimum of four. However, this condition was only weighted with a value of 2. It is therefore not surprising that this condition was not met for all teachers. If this input is to be given greater weight compared with other input, the slide control 'Meet maximum / minimum daily periods for teachers' must be moved further to the right (for example to 3 or 4) and optimisation must be run again.

Timetable diagnosis

21.09.2020 - 27.9.2020

Input data Timetable

Diagnosis	Wtg	Num
All		>= 1
Lessons		6
Class		14
Teacher		39
Too many NTP's	3	1
Double Non-Teaching-Period		1
Lunchbreak too short	3	4
Lunchbreak too long	3	3
Half day request not achieved	4	3
Not enough periods per day	2	8
Too many periods per day	2	4
Too many consecutive periods	3	5
Just one period on a half day	3	10
Room		26
Subject		37
Students		
Lesson sequences		
Calendar - Year Planning		

Type of diagnosis

The condition 'Periods/day min.-max.' has not been obeyed for these teachers.

Weighting: 2
Number: 8

Tea.	Day	Pers/Day	Diff.
Hugo	Fr	1 (4-7)	3

Teachers / Teacher

Name	Surname	Room	NTPs target	Periods/day	Lunch break
Gauss	Gauss		0-3	2-6	1-2
New	Newton		0-1	4-6	1-2
Hugo	Hugo		0-1	4-7	1-2
Ander	Andersen		0-1	4-6	1-3

Hugo - Hugo, Victor Timetable (Tea-Diag)

School year: 21.9.2020 - 30.6.2021

UnSch	Mo	Tu	We	Th	Fr	Sa
1/18	3b HI	-3	1a GEc	3b HI		3a GEc
2	3b GEc	-3	2a HI	4 HI		4 DE
3	4 HI	-3		3b GEc		4 DE
4	4 DE	-3	4 GEc	4 GEc	4 GEc	4 DE
7	-3	-3	-2	+3	-1	
8	-3	-3	-2	+3	-1	

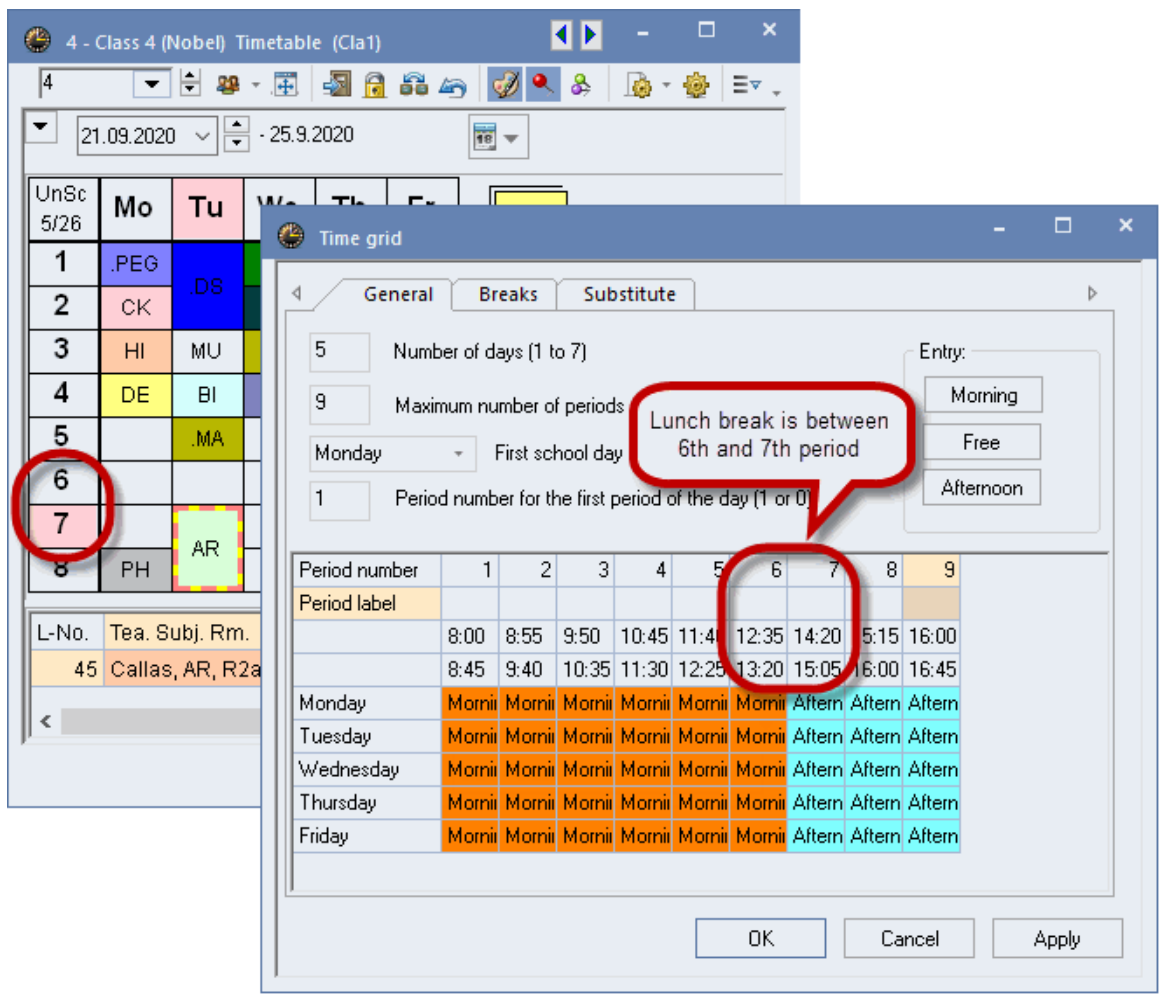
Hugo should teach at least four periods per day. On Fridays this is not the case therefore it is listed in the diagnosis.

7.5 Lunch break

When scheduling the lunch break you have the option of specifying fixed times for the lunch break or of performing flexible lunch break scheduling.

7.5.1 Fixed lunch break

A fixed lunch break - for the entire school - can arise from the time grid.



A particular period (e.g. period 7) can be excluded from lesson scheduling using a block (time request - 3). With this you can set a fixed lunch break for classes on an individual basis. Furthermore, the period is made available as a unit in the timetable (e.g. for scheduling it as an office hour, etc.).

The screenshot displays a software interface for managing time requests for a class. The main window, titled "Time requests / Class", shows a table for "Class 1a (Gauss)". The table has columns for days (Monday-Friday) and periods (1-8). The values are +3 for periods 1-5 and -3 for period 6 on all weekdays. A secondary window, titled "1a - Class 1a (G)", shows a detailed view of the "Additional unspecific time requests" table. This table has columns for Range, Number, and Time request. A row for "Afternoons" has a value of 3 and a note "Blocked, keep free without exception (-3)". A red oval highlights the "6" in the main table's period 6 column.

	1	2	3	4	5	6	7	8	Days	a.m.	p.m.
Monday	+3	+3	+3	+3	+3	-3					
Tuesday	+3	+3	+3	+3	+3	-3					
Wednesday	+3	+3	+3	+3	+3	-3					
Thursday	+3	+3	+3	+3	+3	-3					
Friday	+3	+3	+3	+3	+3	-3					
Saturday											

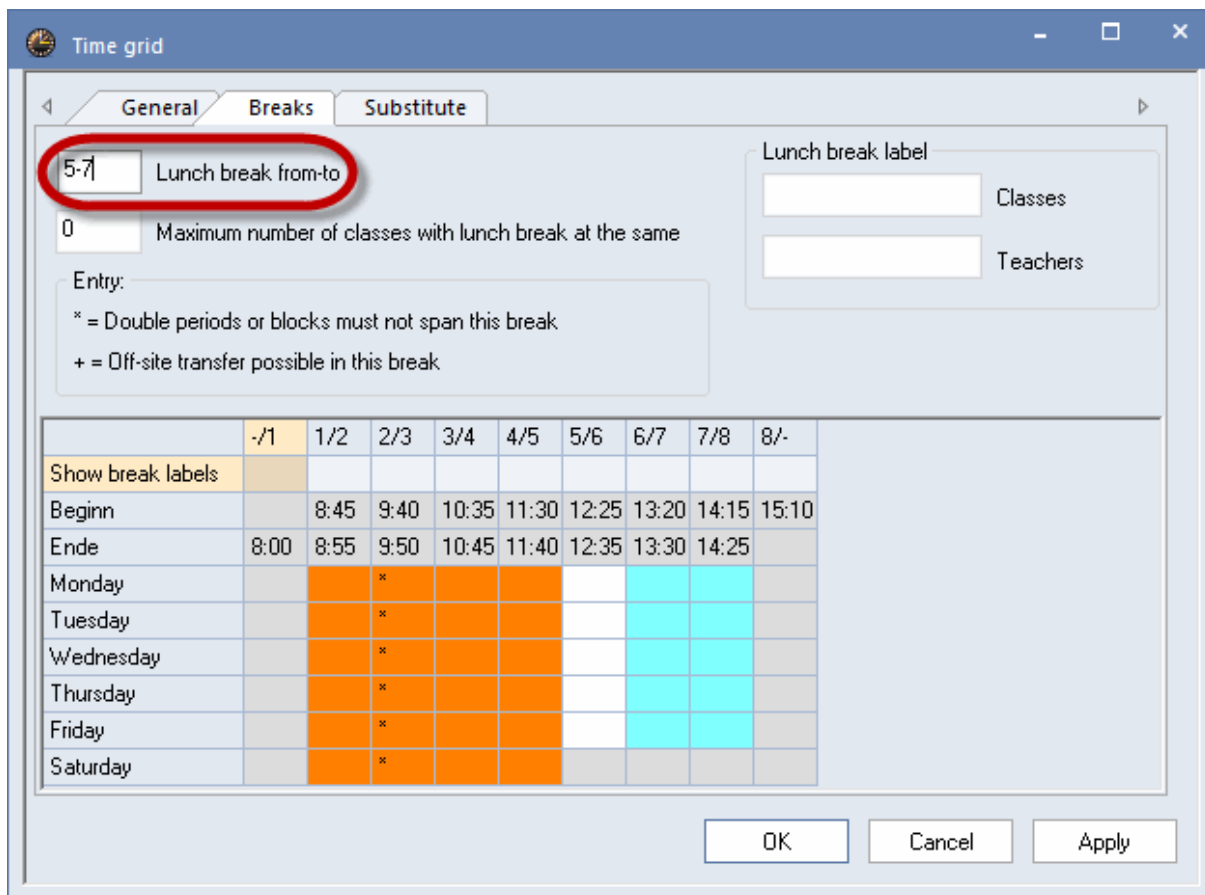
Range	Number	Time request
Afternoons	3	Blocked, keep free without exception (-3)

L-No.	Tea.	Subj.	Rm.	Cla.	Time	School week	Stud.	Special text	Cluster	Line text-2	Student group
31	Arist, MA,	R1a		1a		1-41	28				
+3											

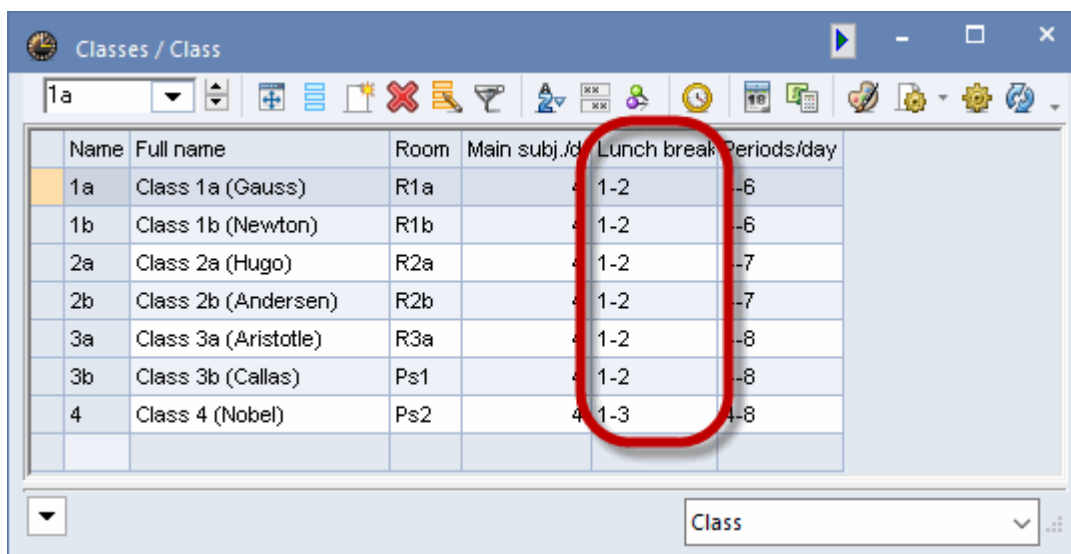
7.5.2 Flexible lunch break

Any lunch break is automatically placed in the last period of the morning and/or the first period of the afternoon. You can influence the position of the lunch break on the 'Breaks' tab under 'Time grid' by selecting the first and last periods that can serve as lunch break. The length of the break between morning and afternoon lessons is specified at a later point in time (e.g. 1-2 periods depending on the class).

The example shows that the fifth period is the first that can be used as lunch break and the seventh period is the last. The lunch break must always lie on the boundaries or across the boundaries between morning and afternoon. The white fields indicate those breaks lying between the last period of the morning and the first period of the afternoon.



The length of the lunch break - i.e. whether it should or may last one, two or three periods - is specified in the class master data window in the 'Lnch Brk' column. This is also entered as a range. For example, '1-2' means that the lunch break may last for one or for two periods. An entry of '1-3' means that the lunch break should last for at least one period and for three at most.



8 Manual scheduling

There is of course the possibility to change the timetable manually. This is done directly in the timetable windows, either in individual timetables or in overview timetables.

8.1 Placing periods

In this example we will be placing periods into an empty timetable and locking them in such a way that subsequent automatic scheduling cannot change their position.

1. Open the demo.gpn file and delete the current timetable via 'Scheduling | Reset the timetable'
2. Unscheduled periods will now be displayed next to the timetable and can be placed in the timetable using drag & drop.

Clicking on a period that you wish to schedule will display possible time slots in the timetable.

Fields which are highlighted green indicate that these would be good slots to place the period avoiding the risk of a clash.

The software also takes into consideration any additional input you have made. For instance, Friday is not displayed as a possible day for the lesson 'Mus' for class 1a because teacher 'Callas' has been allocated a day off on Friday ('Teachers | Master data | Time requests').

Range	Number	Time request
Afternoons	3	Keep free, medium priority [-2]

Tip: Colours of time requests

You can use the <Colours of the time requests> button in the 'Time requests' window to specify the display colours for the different time requests. This is necessary if for example there are difficulties in distinguishing between red and green.

If you click on the <Settings> button and then check the box 'DragDrop: colours same as time requests' on the 'Layout 2' tab, the settings will also be used for manual scheduling in the timetable.

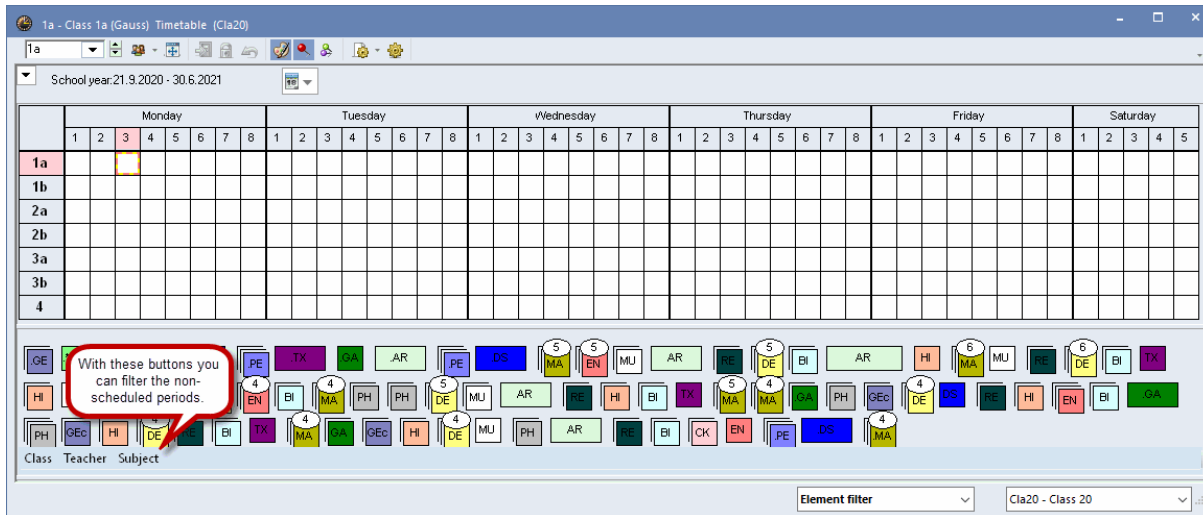
Lessons are automatically displayed and scheduled as single or double periods (or blocks) in accordance with settings made for double periods under lessons.

When there is more than one unscheduled period of a particular lesson, the individual periods will be displayed stacked. When there are more than three periods, the number of unscheduled periods will also be indicated.

You can determine the position of unscheduled periods yourself by simply grouping the stack around the

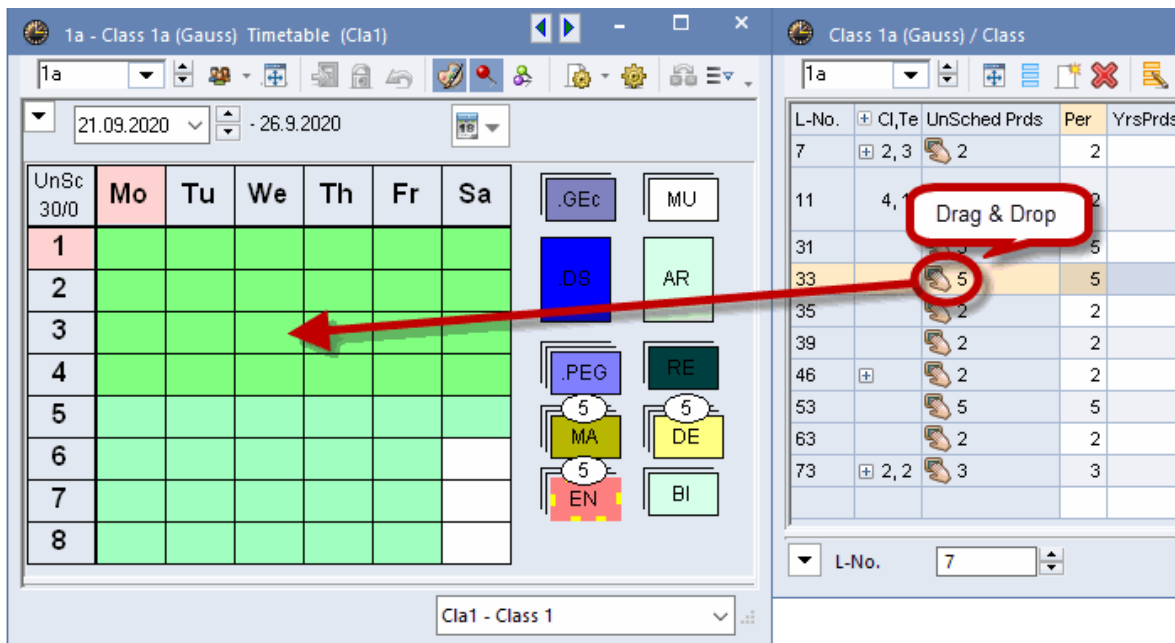
desired position in the timetable. After right-clicking and selecting ' Re-group unsched. prds.' the stacks will be automatically repositioned.


Unscheduled periods can of course also be scheduled via the overview timetables.




Scheduling from the lessons window

Alternatively, you can schedule periods from the lessons window. To do this, click on the relevant period in the 'Unsched Prds' column and use drag & drop to position it in the timetable.



Tip: Undo
 All schedulings can be undone using the  <Undo changes> button

Locking periods in the timetable

You can lock periods in their current position so that a subsequent optimisation cannot change their position by selecting the period in the timetable and then clicking on the <Lock period> button  in the timetable. An * will indicate that the period is now locked.

UnSc 29/1	Mo	Tu	We
1	*GEc		
2			
3			

A locked period is marked with a *.

Warning: Locking manually scheduled periods

If you place periods in the timetable manually without locking them, they may be rescheduled in the course of timetable optimisation.

8.2 Shifting periods

You can easily shift periods in the timetable.

Empty green fields mean that a move to this position is possible without creating a clash.

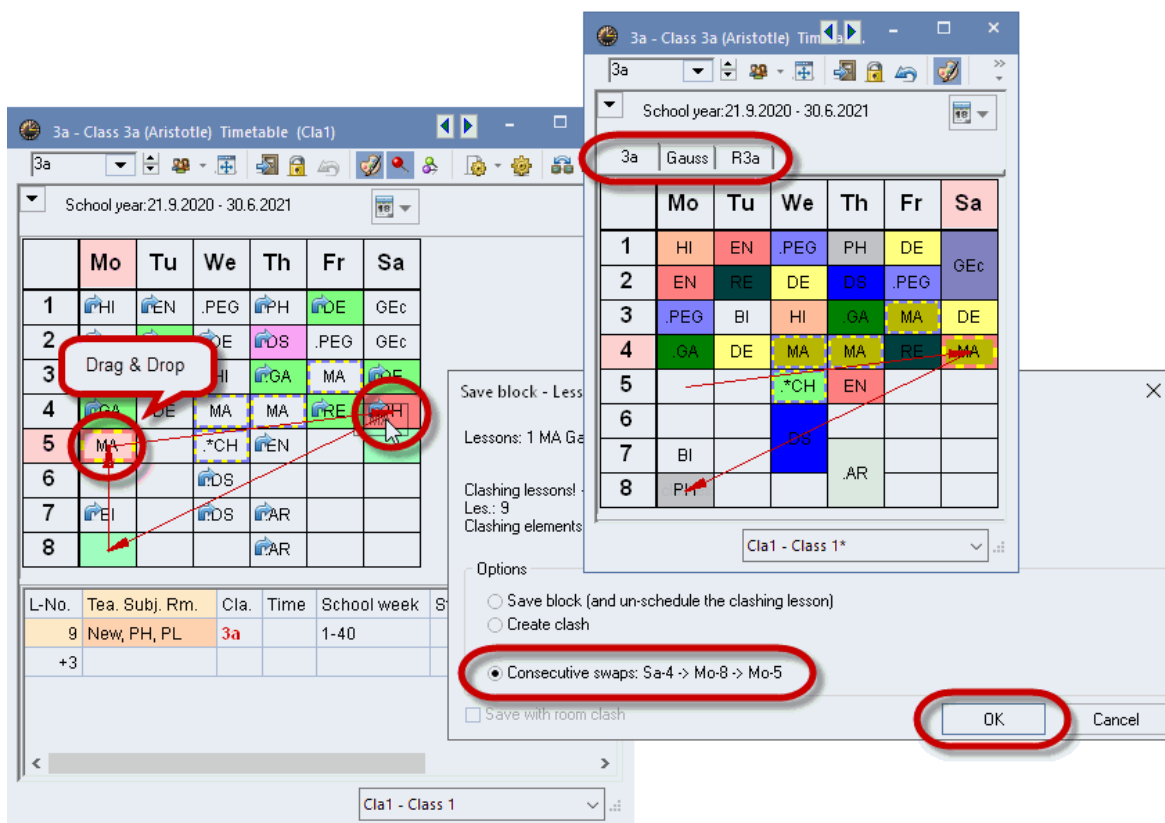
	Mo	Tu	We	Th	Fr	Sa
1	HI	EN	.PEG	PH	DE	GEc
2	EN	RE	DE	DS	.PEG	GEc
3	.PEG	BI	HI	.GA	MA	DE
4	.GA	DE	MA	MA	RE	PH
5	MA		*CH	EN		
6			.DS			
7	BI		.DS	AR		
8				AR		

Red fields indicate that scheduling in this position is possible but that this would infringe important conditions (e.g. blocking).

8.3 Swapping periods

Periods highlighted green (green cells occupied by a period) can be swapped with other periods highlighted green. Periods marked with a blue arrow indicate that a circular change is possible. This is indicated visually in the timetable with arrows. Dropping the original period on it causes a window to open in which you can specify whether a (circular) swap should take place or a clash generated.

At the same time all timetables affected by this swap are shown by tabs. Now you can easily check the consequences of this swap for all classes and teachers (in our example among others Gauss), before you confirm with <Ok>.



Fields shaded purple indicate that it is possible to move (or swap) a period without causing a clash but also that neither the desired room nor the alternative room is free.

	Mo	Tu	We	Th	Fr	Sa
1	HI	EN	.PEG	PH	DE	GEc
2	EN	RE	DE	DS	.PEG	GEc
3	.PEG	BI	HI	.GA	MA	DE
4	.GA	DE	MA	MA	RE	PH
5	MA	BI	.*CH	EN		
6			.DS			
7	BI		.DS	AR		
8				AR		

Scheduling the "dragged" period in a non-highlighted cell is not possible without creating a clash. The lesson details window displays the lesson number and details of the lesson in conflict with the moved period.

Dropping the lesson onto such a period causes a window to open in which you can select whether the original lesson that was in that position should be unscheduled or whether a clash should be generated when you schedule the 'dragged' (active) period.

Save block - Lessons: 67 BI Cer ✕

Lessons: 67 BI Cer - Mo-7 --> Th-6

Clashing lessons! - Number of clashes: 1
 Les.: 68 Subject: BI Teacher: Cer
 Clashing elements: 1 Cer

Options

Save block (and un-schedule the clashing lesson)
 Create clash

Save with room clash

Swap suggestions

If you click on the <Swap suggestions> button in the class timetable window, Untis will display several possibilities to swap periods. This will take into account that a swap can only be made for a class if a swap is performed for another class at the same time. The 'Gain' column will indicate if a swap operation brings about an improvement or degradation in terms of the settings you made (weighting, specifications in master data / lessons). A tab in the timetable displays all class and teacher timetables affected by the

active swap suggestion.

If two classes are to be swapped, the lower section of the suggestion window will display various swap possibilities for the second class. Depending on the swap possibilities the total gain or loss for the timetable will also be indicated here.

Various exchange options with the naming of the most serious problems that result from the exchange.

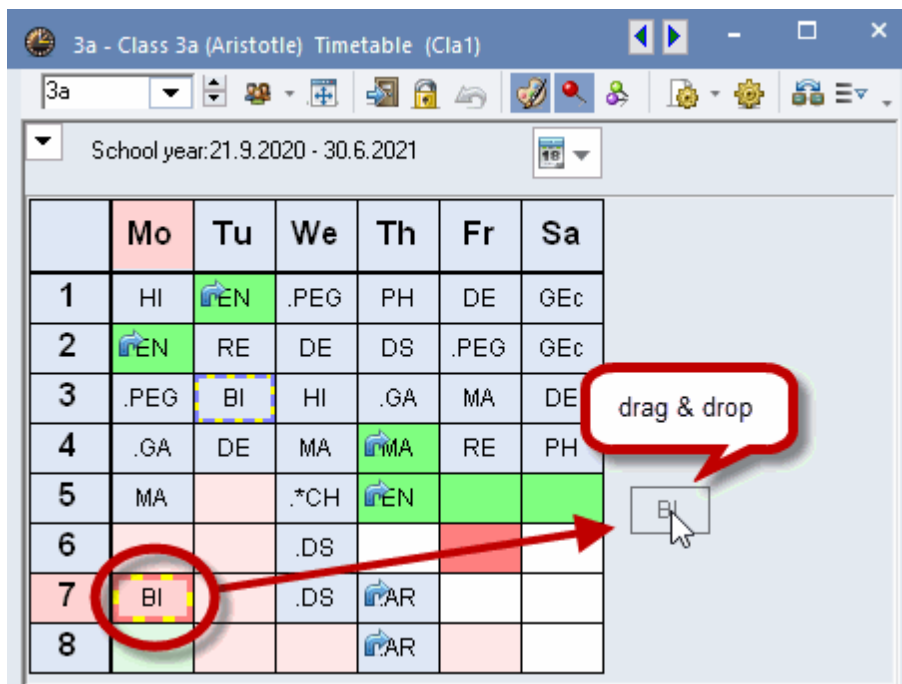
Conseqnc.	Leap cl.	Gain
1	Period time requests	2a -65
2	NTPs	-548
3	NTPs	-589
4	NTPs	
5	NTPs	
6	NTPs	
7	NTPs	
8	NTPs	
9	NTPs	-647
10	NTPs	-648
11	NTPs	-696
12	Period time requests	-729
13	NTPs	-788
14	NTPs	-839
15	NTPs	-851
16	Period time requests	-878

Conseqnc.	Gain	Total
1	Day time requests	61 -4
2	NTPs	38 -27
3	Day time requests	35 -30
4	Day time requests	15 -50
5	NTPs	11 -54
6	Period time requests	-9 -74
7	NTPs	-46 -111
8	NTPs	-290 -355
9	NTPs	-335 -400
10	NTPs	-360 -425
11	Subject twice a day	-635 -700

The tabs show the timetables affected by the exchange.

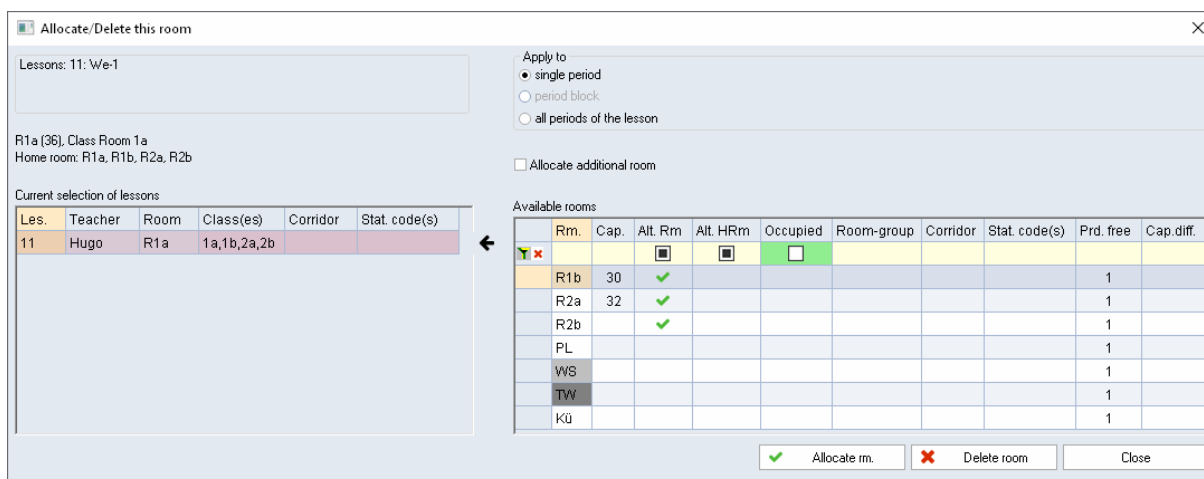
8.4 Unsheduling periods

Unsheduling periods You can also unshedule periods by dragging them into the section next to the timetable or into the timetable details window and dropping them there. The lesson itself will not change.



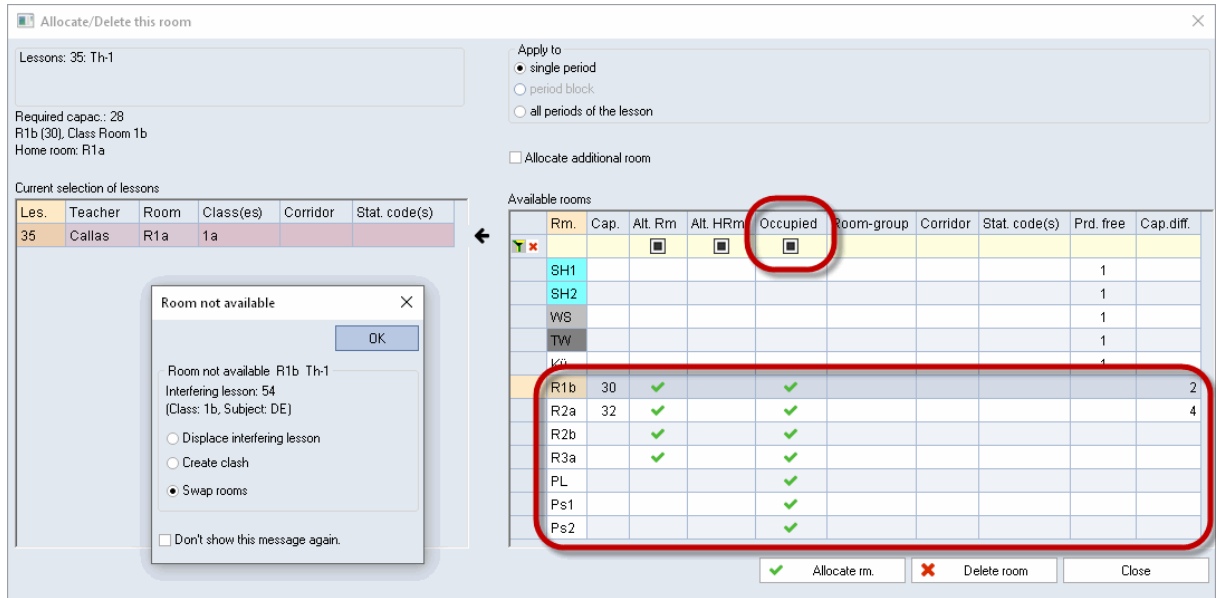
8.5 Assigning rooms

You can also manage room allocation directly in the timetable window. Open the schedule/delete room dialogue using the <Schedule/Delete this room> button. You will see the rooms you entered for lessons and rooms available for scheduling on the right. Select a room and click on the <Assign room> button. You can delete a room that has already been assigned with <Delete room>.



Checking option 'Display occupied rooms' will display all currently occupied rooms. If you wish to assign one of these rooms you can

- force a lesson currently scheduled in the room from the room
- create a room clash or
- swap rooms.



Assigning rooms in the overview timetable for rooms

You can move or swap rooms quite easily using drag & drop in the overview timetable for rooms. The example in the figure shows the teacher Cervantes' lesson being moved from room R3a to the textiles workshop.

R3a - Class Room 3a Timetable (Roo20A)

School year: 21.9.2020 - 30.6.2021

	Monday								Tuesday							
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
SH1	4 New PEB		3a,3 Rub PEB	1a,1 Rub PEB							2b,2 Rub PEB					
SH2	4 Curi PEG		3a,3 Arist PEG	1a,1 Arist PEG							2b,2 Arist PEG					
PL				3b New PH				4 Arist PH				2b New PH				
WS							3a,3 BIV		4 And DS	4 And DS					Arist DS 1b Gaus DS	Arist DS 1b Gaus DS
TW				3a Curi TX					4	4	3b	3b Curi TX			1a,1 Curi TX	1a,1 Curi TX
Kü																
R1a	1a Arist EN	1a Call MU	1a Cer BI	4 Hug DE	3b New MA				1a Arist MA	1a Arist EN	1a Call AR	1a Call AR	1a Nob RE			
R1b	1b Cer BI	1b Arist MA	1b Nob RE		1b Rub DE				1b Rub DE	1b Rub DE	1b Nob RE	1b Arist MA				
R2a	2a Call MU	2a Nob RE	2a New MA	2a Cer DE	2a Cer EN	4 Call AR	4 Call AR		2a Call AR	2a Call AR	4 And MU	2a Cer BI	2a New MA			
R2b	2b Nob RE	2b New MA	2b Call AR	2b Call AR	2b Call MU				2b New MA	2b New MA	3b Gaus GA	3b Gaus GA	2b Rub HI			
R3a	3a Rub HI	3a Cer EN	4 Hug HI	3a Gaus GA	3a Gaus MA		3a Cer BI		3a Cer EN	3a Nob RE	3a Cer BI	3a And DE	4 And MA			
Ps1																
Ps2																

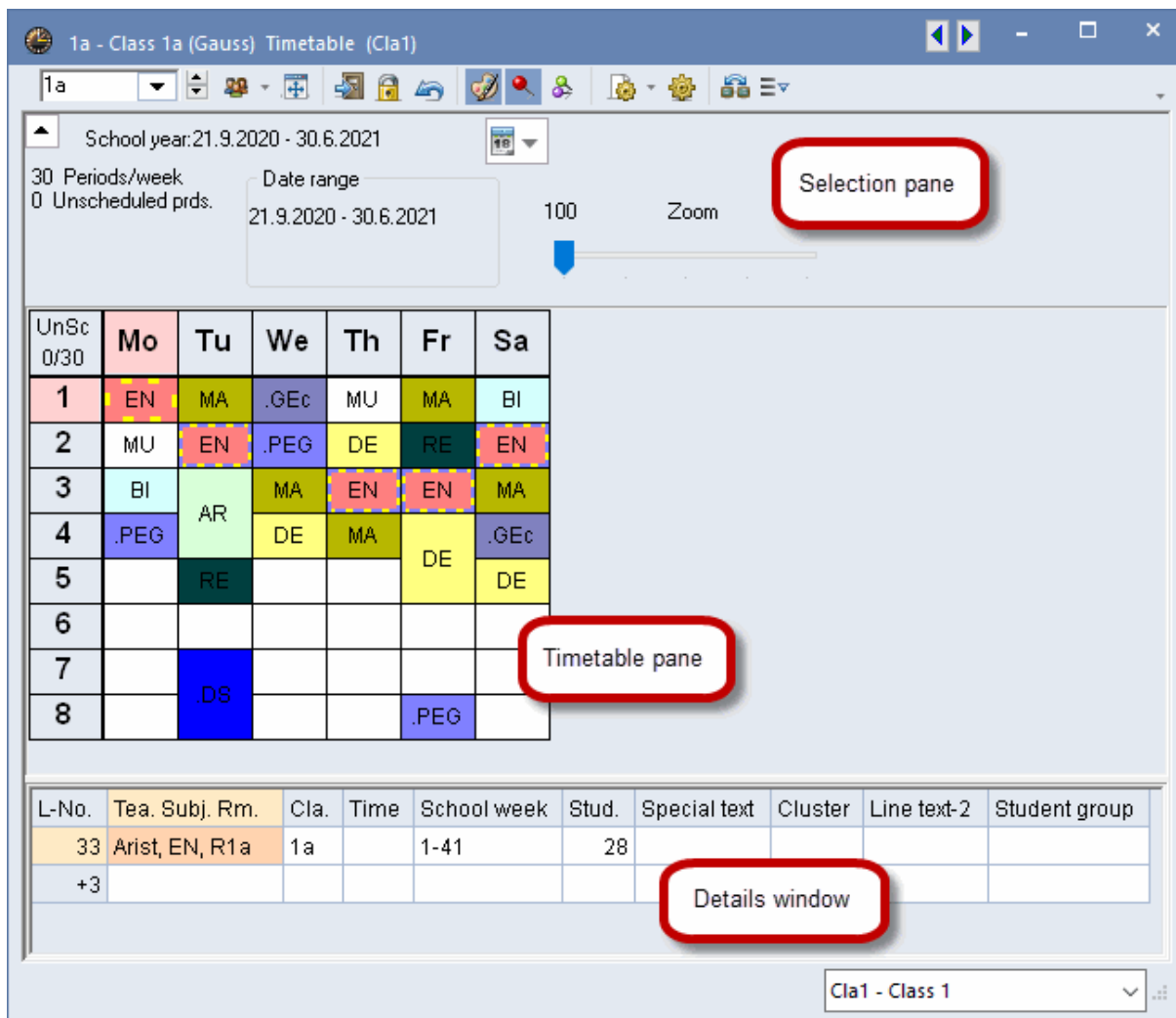
Element filter

Roo20A - Overview rooms*

9 Timetables

You can open ready-made timetables for classes, teachers, rooms and subjects under "Timetables" in the main menu.

Generally speaking, a timetable window consists of three parts: the details window at the top, the actual timetable in the middle and the period details window at the bottom.



Details window

The details window shows various information such as the number of periods per week, unscheduled periods and the time range for which the timetable is valid.

Timetable window

The timetable window shows the actual timetable. You can decide for yourself which information (subjects, rooms, classes etc.) you wish to display and how (font, size etc.).

Period details window

The period details window displays details of the current (highlighted) period..

9.1 Several timetables in one window

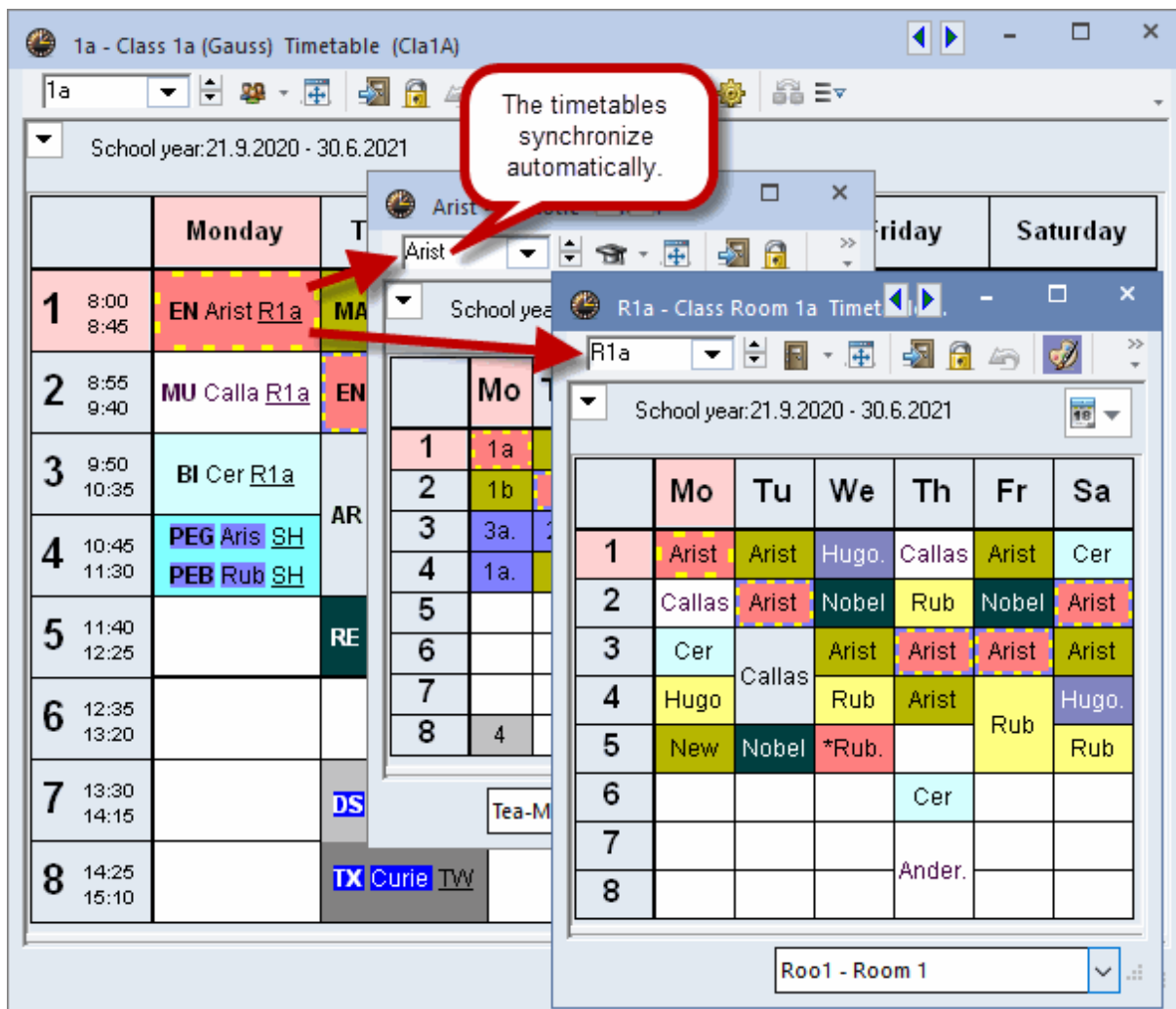
When the <All elements in lesson> button is activated, clicking on a period in the timetable will display tabs showing the timetables of all classes, teachers and rooms involved. You can use the tabs to easily switch from one element to the next.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 8:00 8:45	EN Arist R1a			MU Calla R1a	MA Arist R1a	BI Cer R1a
2 8:55 9:40	MU Calla R1a			DE Rub R1a	RE Nobe R1a	EN Arist R1a
3 9:50 10:35	BI Cer R1a		MA Arist R1a	EN Arist R1a	EN Arist R1a	MA Arist R1a
4 10:45 11:30	PEG Aris SH PEB Rub SH	AR Calla R1a	DE Rub R1a	MA Arist R1a	DE Rub R1a	GEc Hug R1a
5 11:40 12:25		RE Nobe R1a				
6 12:35 13:20						
7 13:30 14:15		DS Ander WS TX Curie TW				
8 14:25 15:10					PEG Aris SH PEB Rub SH	

9.2 Timetable synchronisation

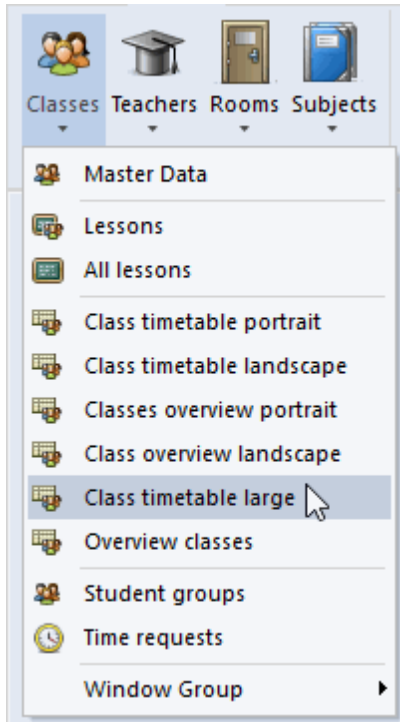
Open a class, a room and a teacher timetable and arrange them next to each other on your screen.

Select Monday, 1st period of class 1a ("EN") in the class timetable. The teacher and the room timetable will be automatically synchronised with the active elements (teacher Arist and room 1a)



9.3 Timetable formats

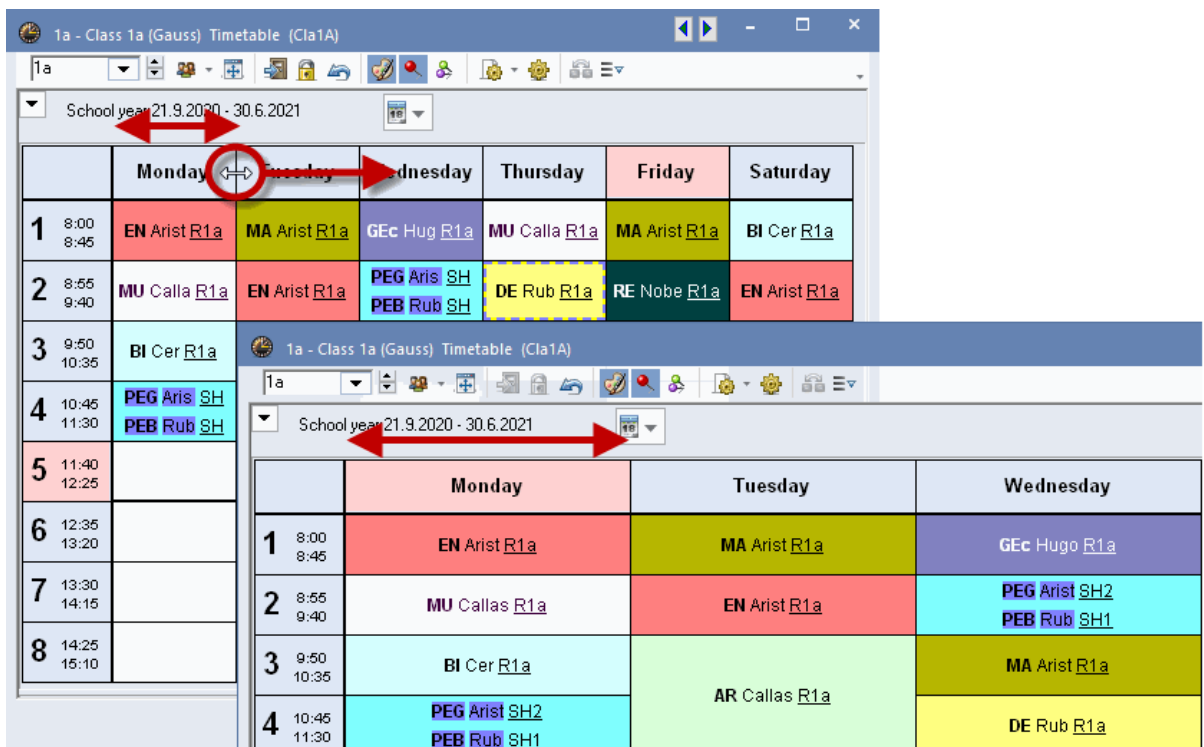
Often used timetable formats such as 'Large timetable' or timetable summaries can be found in the selection list of the classes, teachers, rooms and subjects buttons.



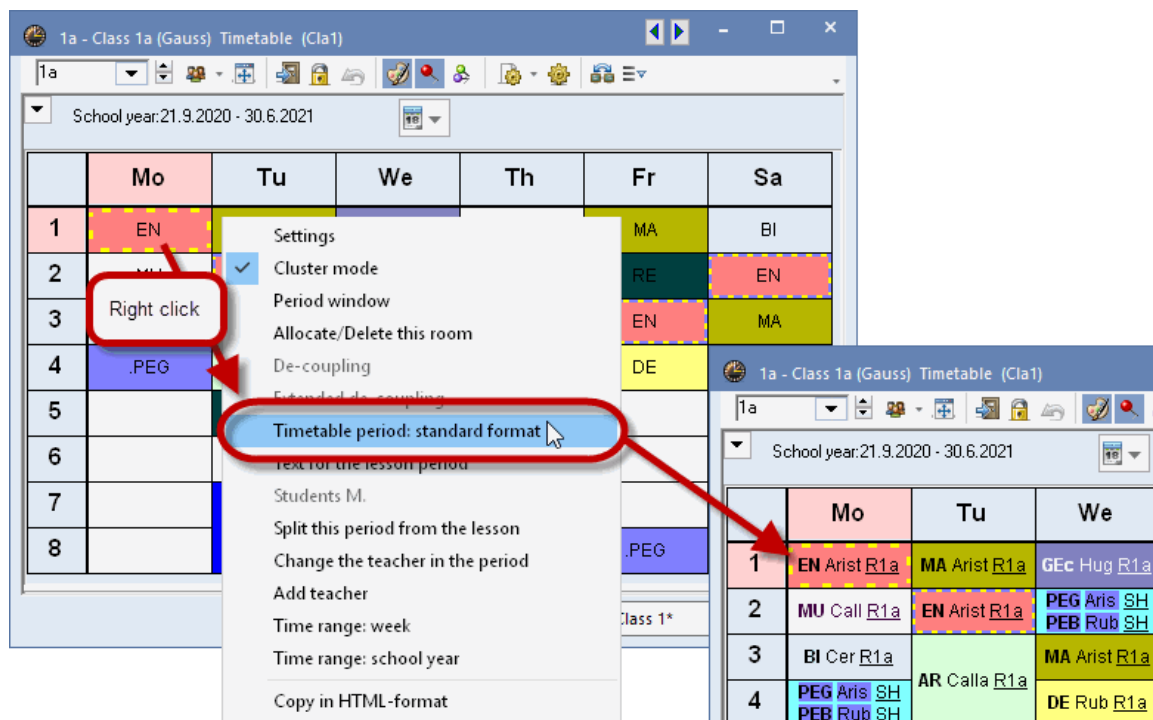
There is a large number of timetable formats. Take a little time to browse through them in order to gain an overview and then decide which format you like best.

9.3.1 Timetable layout / timetable information

You can adjust the size of each timetable as required. To do this, draw the separator lines between the heading rows or columns apart or together. This will alter the width or height of all rows or columns.




It is just as easy to display all relevant information such as teachers, classes, rooms and subjects in the timetable with just one click. To do this, click in the timetable with the right-mouse key and select 'Per. window: Standard format'.



Tip: Timetable formats
 It is advisable to have two timetable formats for each master data element. These come predefined by default. For example keep 'Timetable | Classes' as a small format timetable for working on the timetable. You can then add all information to 'Timetable | Large class timetable' for output.

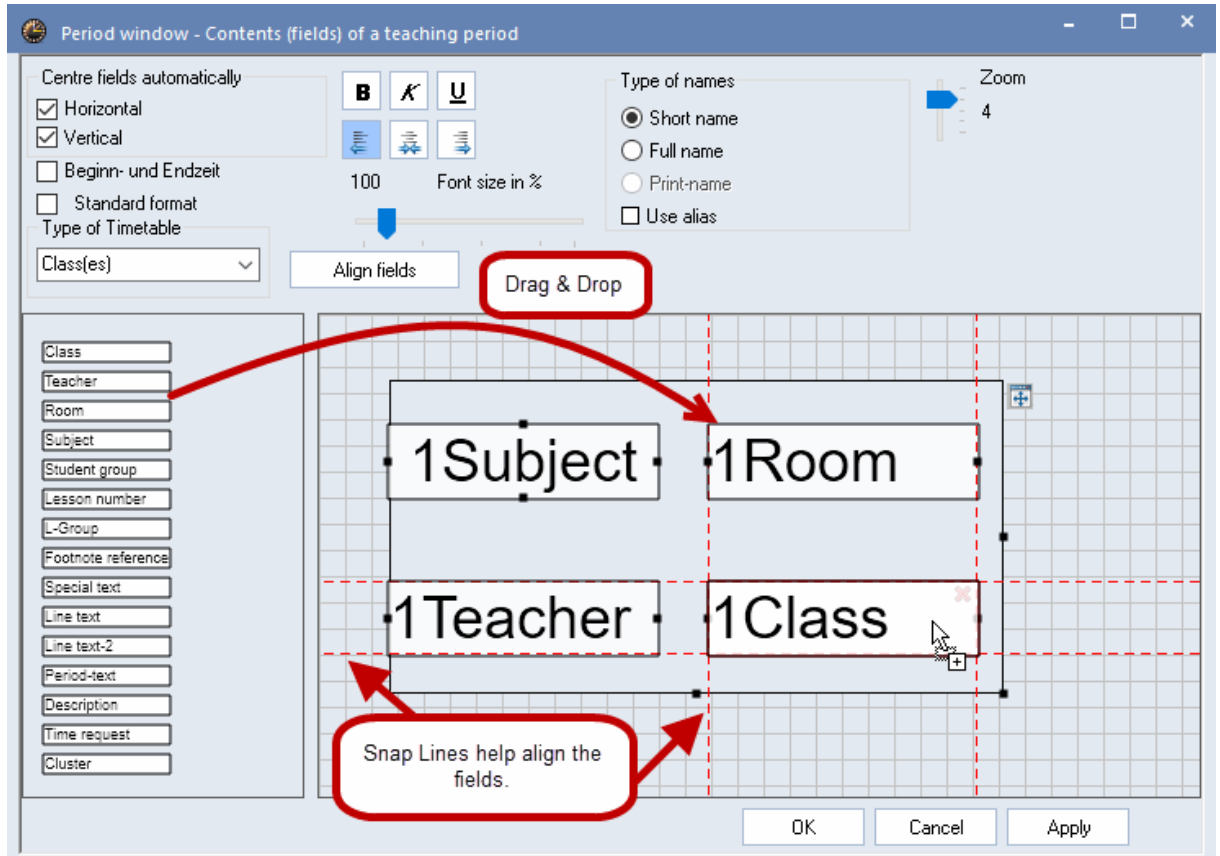
9.3.2 Modifying information in the timetable

You can change any of the contents displayed in the timetable. Only make changes when you do not like the options in the [Standard period](#) or when different content is required.

To do this, click on <Timetable settings>  in the timetable window and then on the button <Period window>. A graphic editor will open depicting the contents of the individual timetable cell.

Note: Per. window: standard format
 If you open this dialogue for a timetable output in [standard format](#) , uncheck the option 'Per. window: Standard format'. You can then perform the steps described here.

All available fields are listed on the left. If necessary, just drag and drop any field into the right segment. Whenever you drag and drop a field in the lesson period, so-called SnapLines are shown assisting you with aligning it.



C

You can even change the font size of each field. Please note that the background field symbolises the timetable cell. Confirm with <OK> once the timetable cell looks the way you want it to. <OK>.

	Mo	Tu	We	Th	Fr	Sa
1	EN Arist	MA Arist	GEc Hugo.	MU Callas	MA Arist	BI Cer
2	MU Callas	EN Arist	PEG Arist			
3	BI Cer	AR Callas	<div style="border: 1px solid black; padding: 5px;"> 1 Subject 1 Teacher </div>			
4	PEG Arist. PEB Rub				<div style="border: 1px solid black; padding: 5px;"> 2 Subject 2 Teacher </div>	
5		RE Nobel				
6						
7		DS Ander.				
8		TX Curie			PEG Arist. PEB Rub	

Tip: Displaying coupling cells
 When more than one teacher is involved in a lesson, you can add the field 'Teacher' several times. For example, if 3 teachers participate in a lesson, you need at least 3 teacher fields in the graphic editor in order to display all teachers involved.

9.4 Printing timetables

Proceed as follows if you wish e.g. to print a teacher overview timetable:

Open an overview timetable from the demo.gpn file via 'Teachers | Teachers overview landscape'.

Now either press the <Page layout> or the <Print> button and confirm the Print selection dialogue with <Ok>.

The screenshot shows a web browser window titled "Gauss - Gauss, Carl Friedrich Timetable (Tea20A)". The interface includes a search bar for "Teachers of the class/subject" and a date range "School year: 21.9.2020 - 30.6.2021". The main content is a timetable grid with columns for "Monday" and "Tuesday", each with 8 sub-columns. Rows represent different classes: Gauss, New, Hugo, Ander, Arist, Calla, Nobel, Rub, Cer, and Curie. Each cell in the grid contains a colored box with a number and a teacher's initials (e.g., "3a R3a GA"). A "Print selection" dialog box is overlaid on the grid, showing "Teacher: 10/10", a "Selection..." button, and options for "PDF", "HTML", and "Cancel".

9.5 Timetables: Web/on your smart phone

With the [WebUntis basic package](#) you can easily make all your timetables available for students, teachers, parents, companies, etc. Upload your data directly from Untis to the WebUntis Server by just one click. The timetables can then either be shown in the web browser on your PC or tablet or on your smart phone with the free-of-charge [Untis Mobile App](#).

For further information please go to our web site www.grupet.at, Products | WebUntis.

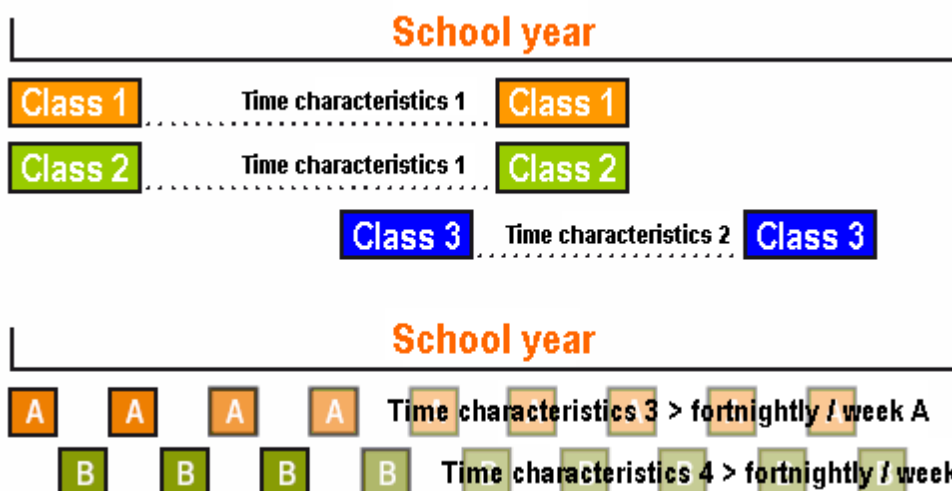
10 Modules

In addition to the standard package Untis offers a number of additional features, which are available in special modules. There are separate manuals describing these functions in greater detail. The modules are listed briefly below.

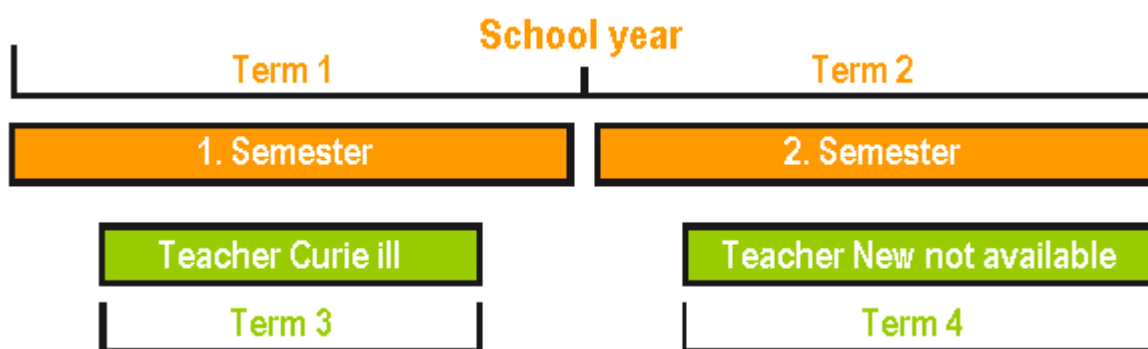
You will also find a detailed description on our website at www.untis.at. You can also test each of the modules. If you are interested, please contact your Untis partner.

Multi-week timetable

This module enables you to schedule time-limited lessons (e.g. for graduating classes) and periodic lessons (e.g. every 2 weeks). You can also model completely irregular timetables that may be found at many vocational schools.



Furthermore, the school year can be split into independent terms with different timetables. This allows several independent timetables for a single school year to be created in one file, enabling analyses and statistics to be easily drawn up covering the complete school year.



Lesson planning and Value calculation

This module assists you before actual timetable scheduling starts – with the planning of teacher deployment (subject allocation, teaching load). There is a number of tools available to help in allocating lessons (e.g. Lesson matrix, Lesson table, Teacher suggestion etc.). This module is also used for overall value calculation (teacher target and actual values, subject factors, values of date-limited lessons etc.).

Lesson matrix - Default

Search Filter Highlight suggestions

Class(es) (8/8)	Subject (18/18)	Rel	NetW	D	Spra	GS	Gw	Kunst
	Σ	14.0	63.0	33.0	14.0	11.0	8.0	
1a	27	Nobel (2)	Arist (5)	Rub (5)	Arist (5)	Ander (1)	Hugo (2)	Ander (2) Callas (2) Callas (2)
1b	30	Nobel (2)	Arist (6) Cer (2)	2 Rub (6)		Ander (1)	Hugo (2)	Gauss (2) Ander (1) Callas (3) Callas (1)
2a	32	Nobel (2)	Callas (1) Gauss (1) Ander (1) New (1) New (4) New (2) Cer (2)	5 Nobel (1) ?-1 (1) Cer (4)	2 Rub (1) Hugo (1) Cer (4)	2 Hugo (2)	Hugo (2)	Ander (2) Callas (1) Callas (2)
2b	32	Nobel (2)	Callas (1) Gauss (1) Ander (1) New (1) New (2) Cer (2) New (5)	5 Nobel (1) ?-1 (1) Callas (5)	2 Rub (1) Hugo (1)	Rub (2)	Hugo (2)	Ander (2) Callas (2) Callas (2)

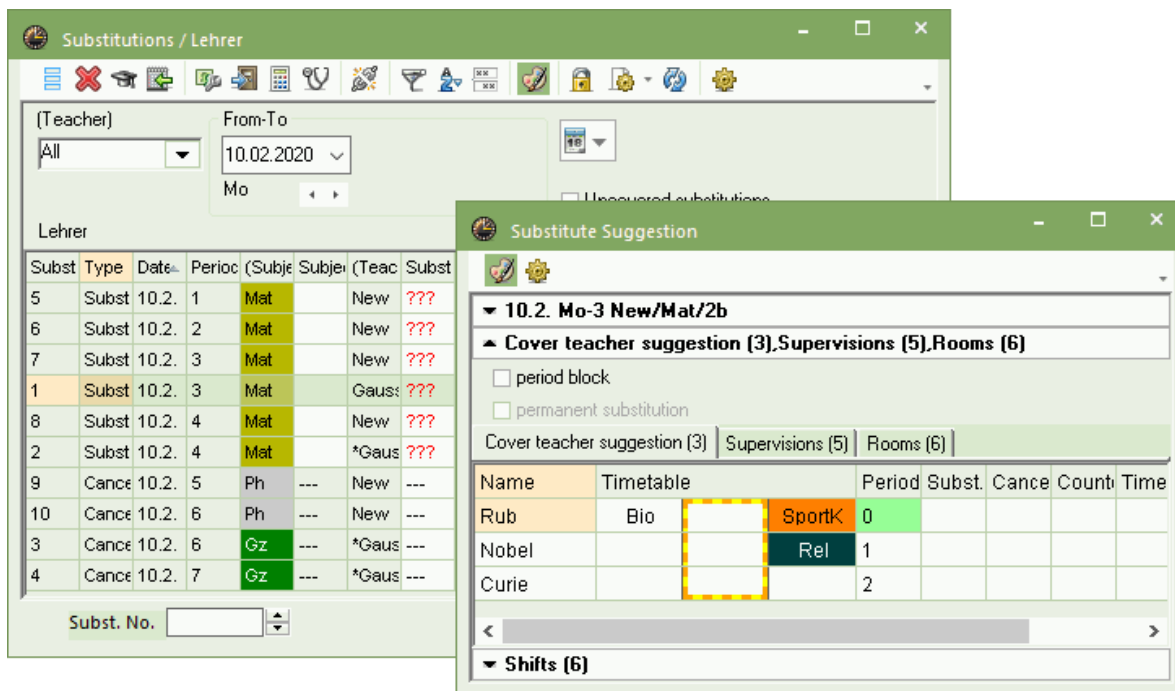
L-No.	Per	Teacher	Subject	Class(es)	Room	Home room	Male	Female	Inter (X)
46		Nobel	Rel	1a		R1a			

10.02. Default

Week	Fr. - To	Term	Lesson
Total	21.9.-30.6.		697.000
YrsPrds			0.0
1	21.9.-27.9.	1	17.000
2	28.9.-4.10.	1	17.000
3	5.10.-11.10.	1	17.000
4	12.10.-18.10.	1	17.000
5	19.10.-25.10.	1	17.000
6	26.10.-1.11.	1	17.000
7	2.11.-8.11.	1	17.000
8	9.11.-15.11.	1	17.000
9	16.11.-22.11.	1	17.000
10	23.11.-29.11.	1	17.000
11	30.11.-6.12.	1	17.000
12	7.12.-13.12.	1	17.000
13	14.12.-20.12.	1	17.000
14	21.12.-27.12.	1	17.000
15	28.12.-3.1.	1	17.000
16	4.1.-10.1.	1	17.000
17	11.1.-17.1.	1	17.000
18	18.1.-24.1.	1	17.000

Cover planning

Cover planning is a fully integrated tool which helps you to assign and coordinate daily substitutions. A second major task of the cover planning module is the maintenance of substitution statistics and their evaluation in accordance with your own criteria and those specified by the authorities.



Break supervision

In many schools, students have to be supervised during the breaks. Untis provides the ideal tool for this task. You can specify the break supervision areas yourself as well as defining what amount of supervision duties should be allocated to which teachers and also which teachers should be excluded from supervision. This module is also integrated with the cover planning module, i.e. cover can also be planned for break supervision.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	*4. PEB SH1	2b MA R2b			Ar2 3b PH PL	Ar1 3b MA Ra
2	2b MA R2b			3b MA Ra	2b PH PL	
3	Ar1 2a MA R2a			Bas 2a MA R2a	2a PH PL	Ar1 3b PH PL
4	3b PH PL	2b PH PL				
5	3b MA Ra	2a MA R2a				
6	3a PH PL					
7						
8						

Break supervisions

Bas

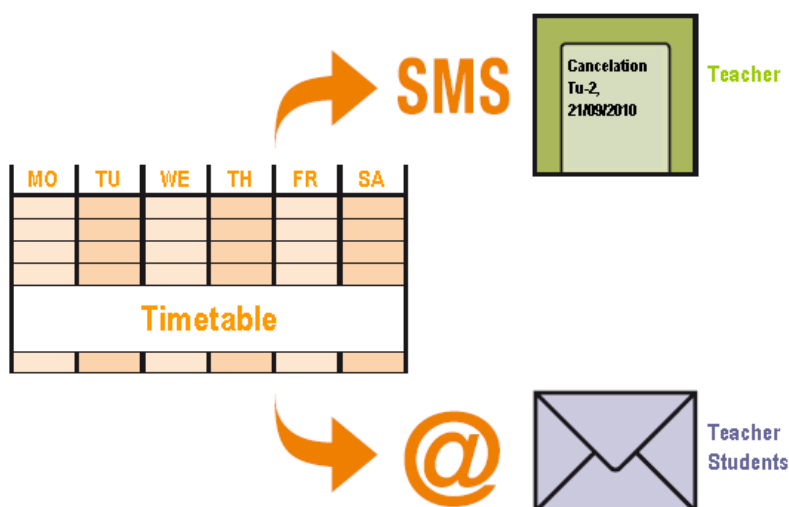
Corridor | Teacher

Minutes: 420 (Uncovered:0.0) Total school year Lesson group Full name

	0/1	1/2	2/3	3/4	4/5	5/6	6/7	7/8	8/
		8:45	9:40	10:35	11:30	12:25	13:20	14:15	15:10
	8:00	8:55	9:50	10:45	11:40	12:35	13:30	14:25	
Monday	+ Callas		Cer	Arist					
Tuesday	+ Curie		Curie	Cer					
Wednesday	+ Arist		Rub	Gauss					
Thursday	+ Callas		New	Arist					
Friday	+ Cer		Arist	Cer					
Saturday	+ Hugo		Hugo	Arist					

Info-timetable

This module was specifically designed to show timetables and cover planning data on the Internet or on an intranet or to distribute them by email. The possibility of displaying substitutions fully automatically in the school entrance area on monitors or by means of a projector is becoming increasingly popular. This allows substitutions to be updated immediately without having to reprint and display paper lists.



Student details window (magnifier)

This module is aimed at school systems in which students have few course options (and a relatively large number of compulsory courses). Students can be assigned individual courses and timetable optimisation can determine which optional courses can be held in parallel. This results in individual timetables for each student.

	Monday	Tuesday	Wednesday	Thursday	Friday
1 8:00 8:45	re11 Bec r12			E1 Shak r12	
2 8:55 9:40	E1 Shak r12	m2 Colu r12	ru1 Pas	peg Bac th2	re11 Bec r12
3 9:50 10:35	ru1 Pas	H1 Cer	g1 Goeth r12	H1 Cer	ar1 Rub r12
4 10:45 11:30	H1 Cer		ch2 Mend rch	ru1 Pas	geo Colu r12
5 11:40 12:25	ch2 Mend rch	E1 Shak r12	m2 Colu r12	m2 Colu r12	E1 Shak r12
6 12:35 13:20			E1 Shak r12		H1 Cer r12
7 13:30 14:15			peg Bac th2	g1 Goeth r12	
8 14:25 15:10	geo Colu r12	ar1 Rub r12	H1 Cer	ch2 Mend rch	
9 15:20 16:05		g1 Goeth r12			
1 16:15 17:00	g1 Goeth r12				

Course scheduling

This module is a powerful tool for those types of school in which the students can freely choose their courses (e.g. in the sixth form). There are various tools available for creating sets automatically and manually.

Course-Cluster-Matrix

76 Periods/week Clashes

Class level: All

Subject/Les. Per (Open periods) Students

Class: All

								1	2	3	4	5	6	7	8	9	10	11	12	13	14
								T1_1	T1_2	T2_1	T2_2	T3_1	T3_2	T4_1	T4_2	T5_1	T5_2	T6_1	T6_2	C13_1	C13_2
								5	5	5	5	5	5	3	3	3	3	3	3	2	2
								34	37	43	50	33	27	49	37	49	31	51	38	55	57
Subje	Les.	Per	Open	Teach	Class	Level	Stu.	34	37	43	50	33	27	49	37	49	31	51	38	55	57
M1	9	5	0	Fer	12	12	15	X													
E1	6	5	0	Shak	12	12	19	X													
M1	90	5	0	Kep	13	13	13		X												
E1	87	5	0	Stan	13	13	24		X												
Eco1	8	5	0	Smith	12	12	21			X											
H1	13	5	0	Cer	12	12	12			X											
BID1	10	5	0	Nobel	12	12	10			X											
Eco1	89	5	0	Marx	13	13	22				X										
PH1	93	5	0	New	13	13	11				X										
H1	94	5	0	Tolk	13	13	7				X										
BID1	91	5	0	Mend	13	13	10				X										
PH1	12	5	0	Gal	12	12	9					X									
L1	7	5	0	Cic	12	12	9					X									
E2	85	5	0	Shak	12	12	6					X									

Department planning

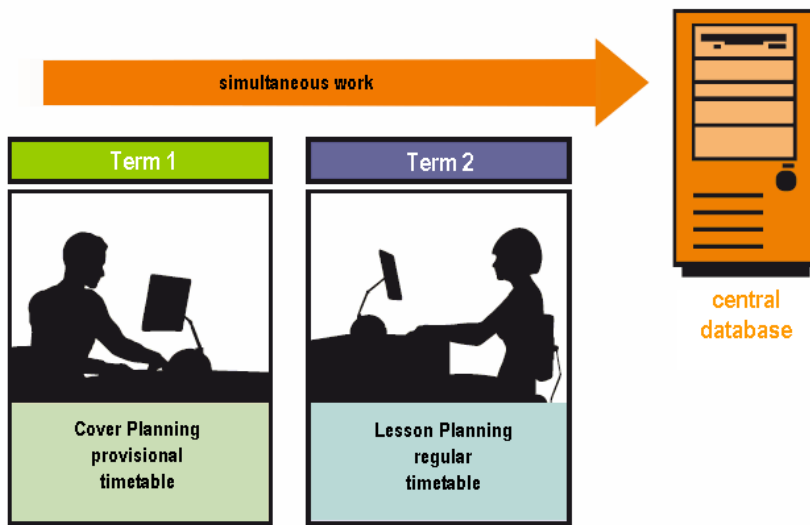
In large schools, individual departments often schedule their timetables independently. Untis enables you to split the overall timetable of the school into separate department files and subsequently to merge them once more into one school file.

- ✓ - All -
- D1 (Department 1)
- D117 (Department117)
- ME (Mechanical Engineering)

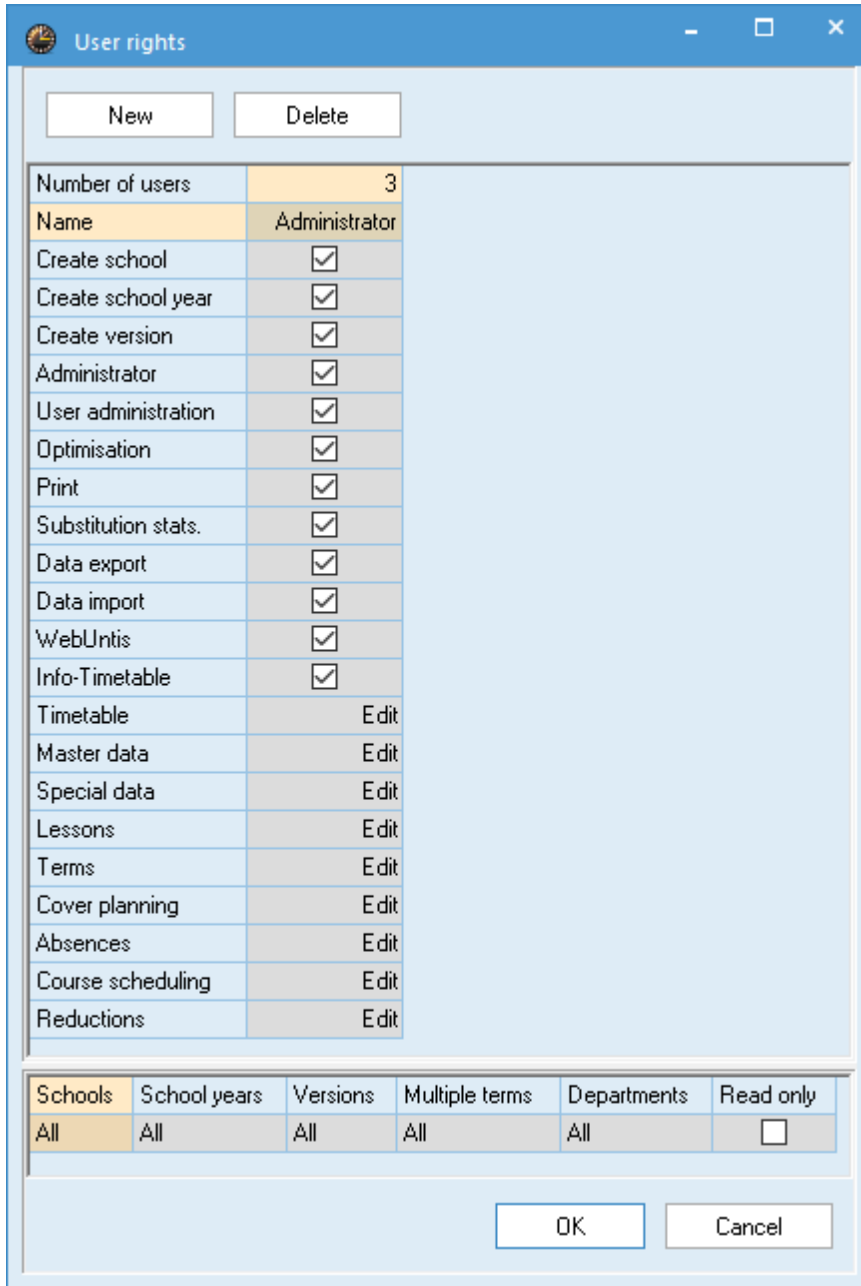
Decentralised operations are possible with the module "Department Timetables" Simultaneous scheduling with the same set of data is possible with Untis MultiUser

11 Untis MultiUser

Untis MultiUser is the ideal solution for situations in which several people work together on the timetable independently. For example, different departments may create the school's overall timetable, or the school secretary enters teacher absences each day and the cover planner generates the resulting substitutions.



Untis MultiUser is simple and secure thanks to its user rights system.



12 WebUntis

In addition to the aforementioned [basic package](#) , WebUntis is available in the versions Agenda, Class register and Student.

Agenda

WebUntis Agenda is an easy-to-use, web-based room scheduling and booking system. You can also use WebUntis Agenda to manage and make better use of all your school resources such a video projectors, music systems, notebook trolleys etc..

WebUntis Agenda allows any teacher to find the best room independently and at short notice – from home via the Internet. This increases teacher flexibility and reduces administrative overhead – WebUntis Agenda saves time!

Today	Timetable	Lessons	Book	Class register	Courses	Master data	Administration	
-------	-----------	---------	------	----------------	---------	-------------	----------------	--

← Mon Dec 201

Room selection for room overview

	Mon, 12/12/16	Tue, 12/13/16	Wed, 12/14/16	Thu, 12/15/16	Fri, 12/16/16	S
HE1						
PL						
Ps1						
Ps2						
r01						
r02						
r03						
r04						
r05						
r06						
r07						
r08						
r09						
r10						
r11						
r12	Activity	Activity	Activity	Activity	Activity	Activity
r13	Activity	Activity	Activity	Activity	Activity	Activity
R1a						
R1b						
R2a						
R2b						
R3a						
rch	Activity	Activity	Activity	Activity	Activity	Activity
rph	Activity	Activity	Activity	Activity	Activity	Activity
SH1						
SH2						
th1			Activity	Activity	Activity	Activity
th2		Activity	Activity	Activity	Activity	Activity
TW						
WS						

Legend Free period Lessons Not confirmed Activity Blocked period Holidays Holidays (not bookable) Examination Substitution

Back

Class register

The old (paper-based) class register is dead - long live the electronic class register! The WebUntis solution is easy to use, fast and convenient. Student absences can be registered centrally in the secretary's office, teachers enter the teaching content of each class (from home if they wish) and special functions for class teachers make administrative tasks child's play. You can find unexcused periods at the click of a mouse and easily generate lists of student absences or other statistics...

Today	Timetable	Lessons	Book	Class register	Courses	Master data	Administration
-------	-----------	---------	------	----------------	---------	-------------	----------------

Class register for the lesson Dec 19, 2017 8:00 AM - 8:45 AM

Lessons

Class 1a
Teacher Arist
Subject MA

No examination ?

Students in the lesson (3)

<input type="checkbox"/> Andrew	<input type="checkbox"/> Emma	<input type="checkbox"/> Lukas	<input type="checkbox"/> Oliver
<input type="checkbox"/> Aylin	<input type="checkbox"/> Elisabeth	<input type="checkbox"/> Marcus	<input type="checkbox"/> Patricia
<input type="checkbox"/> Petrus	<input type="checkbox"/> Fabian	<input type="checkbox"/> Maria-Theresia	<input type="checkbox"/> Simon
<input type="checkbox"/> Lina	<input type="checkbox"/> Ingo	<input type="checkbox"/> Mirco	<input type="checkbox"/> Sebastian
<input type="checkbox"/> David	<input type="checkbox"/> Finn	<input type="checkbox"/> Maximilian	<input type="checkbox"/> Leon
<input type="checkbox"/> Leonie			

absent Absences not yet checked Enter grades Send message

Absent students (0)

Nothing to display

Teaching content

Click here to enter the teaching content.

Homework

No homework on record

Class-register entries (0)

Nothing to display

Class services (0) 1a

Nothing to display

Create ticket Students with pictures Back

13 Updates

The latest news about Gruber&Petters products, current updates and much more can be found on our website at www.grupet.com.

We hope that you enjoy working with Untis and wish you lasting success with your timetables.

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