



GRUBER & PETTERS

# Untis Lessons

[grupet.at](http://grupet.at)

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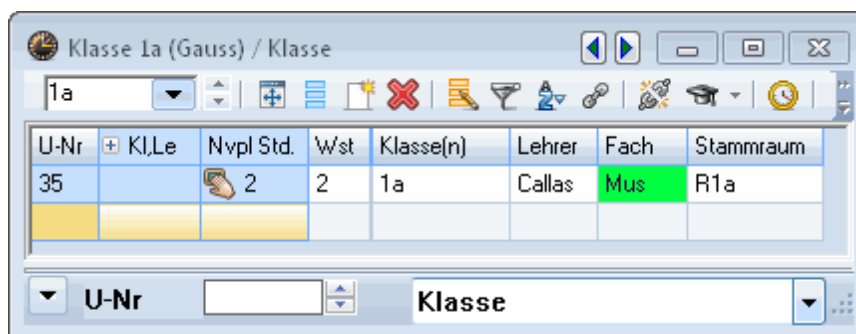
# 1 Lessons

A lesson is the combination of the elements class , teacher , subject and room with a specific number of periods and perhaps with additional parameters. A difference is made between **planned** and **scheduled** lessons.

A planned lesson would be e.g. that teacher Callas should teach two periods of music to class 1a in room R1a.

The scheduled lesson would also contain the position of the lesson in the timetable, e.g. the lesson takes place on Mo-2 and Th-1.

## Planned lessons

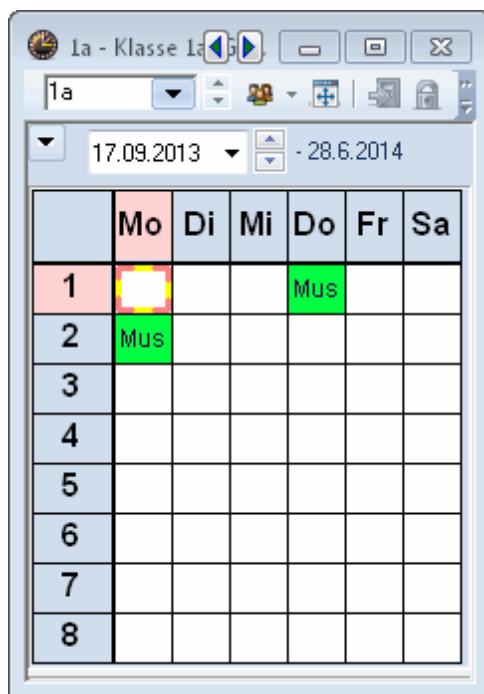


The screenshot shows a software window titled 'Klasse 1a (Gauss) / Klasse'. It contains a table with the following data:

U-Nr	Kl,Le	Nvpl Std.	Wst	Klasse(n)	Lehrer	Fach	Stammraum
35		2	2	1a	Callas	Mus	R1a

Below the table, there are two dropdown menus: 'U-Nr' and 'Klasse'.

## Scheduled lessons



The screenshot shows a software window titled '1a - Klasse 1a'. It displays a timetable grid for the period from 17.09.2013 to 28.6.2014. The grid has 8 rows (numbered 1 to 8) and 7 columns (labeled Mo, Di, Mi, Do, Fr, Sa). The data in the grid is as follows:

	Mo	Di	Mi	Do	Fr	Sa
1				Mus		
2	Mus					
3						
4						
5						
6						
7						
8						

## 2 The lesson window

Similar to all master data windows a lesson window always comprises three sections: the [toolbar](#) , the grid view and the form view.

The function of the form and grid views is the same as with master data windows . The form view displays one lesson at a time with all the attributes belonging to the lesson while the grid view displays a table of all lessons. Each lesson is automatically assigned a lesson number (which you cannot alter) which the application uses as an internal ID.

**Note: Views**

The lesson window is a view. This means that the information provided in chapter ' Master data views ' on the basic use of windows ( Editing views and Managing views ) also applies to lesson windows.

You can open the standard views for lessons sorted by class or by teacher via menus items 'Lessons | Classes' and 'Lessons | Teachers' respectively.

Klasse 2a (Hugo) / Klasse

Symbolleiste

2a

U-Nr	Kl,Le	Nvpl	Wst	Jst	Lehrer	Fach	Klasse(n)	Fachraum	Stammraum	Dopp.Std.	Block
11	+ 4, 1		2		Hugo	Gw	1a,1b,2a,2b		R1a		
6	+ 3, 7		1		Callas	Ch	2a,2b,3a		R2a		
75	+ 2, 2		3		Rub	SportK	2b,2a	Th1	R2b		
81	+ 2, 2		2		Curie	Tw	2b,2a	Twr	R2b	1-1	
94	2, 1		1		New	Gz	2a,2b		R2a		
18			2		Hugo	His	2a		R2a		
38			1		Callas	Mus	2a		R2a		
41			2		Callas	Ke	2a		R2a	1-1	
48			2		Nobel	Rel	2a		R2a		
59			4		Cer	D	2a		R2a		
60			4		Cer	E	2a		R2a		
65			2		Cer	Bio	2a		R2a		
90			4		New	Mat	2a		R2a		
95			2		New	Ph	2a	Phys	R2a		

Rasteransicht

Unterricht Stundenplan Kennzeichen Werte Kopplungszeile

2 Wochenstunden Alias-(Zweit)Name Fachgruppe

Jahresstunden Beschr. Studenten

Hugo Lehrer Raum Studentinnen

Gw Fach R1a Stammraum 0 Gesamt

1a,1b,2a,2b Klasse(n) Statistik-Kennzeichen Studenten Min

Teilungs-Nr. U-Gruppen Studenten Max

Schülergruppe ☐ Std. auf U-Gruppen verteilen Stud. Kurs

Text

ZeilenText

ZeilenText-2

U-Nr Klasse

**Warning: Coupled lessons**

In the case of [coupled lessons](#) (lessons taking place simultaneously) you will see a + in the *Cl,Te* column. Clicking on this will display all the coupling rows of the lesson concerned.

### 3 Entering lessons

Lessons can be entered in the form view or in grid view . Since there are different types of lessons they will be described here separately.

A coupling consists of lessons that have several elements of the same type and that must take place at the same time. In the case of a class coupling, several classes or parts of a class are taught by one teacher, and in the case of a teacher coupling several teachers teach one or more classes at the same time.

- [Simple lessons](#)
- [Double period - block](#)
- [Couplings](#)

**Note: 'Cl,Te' field**

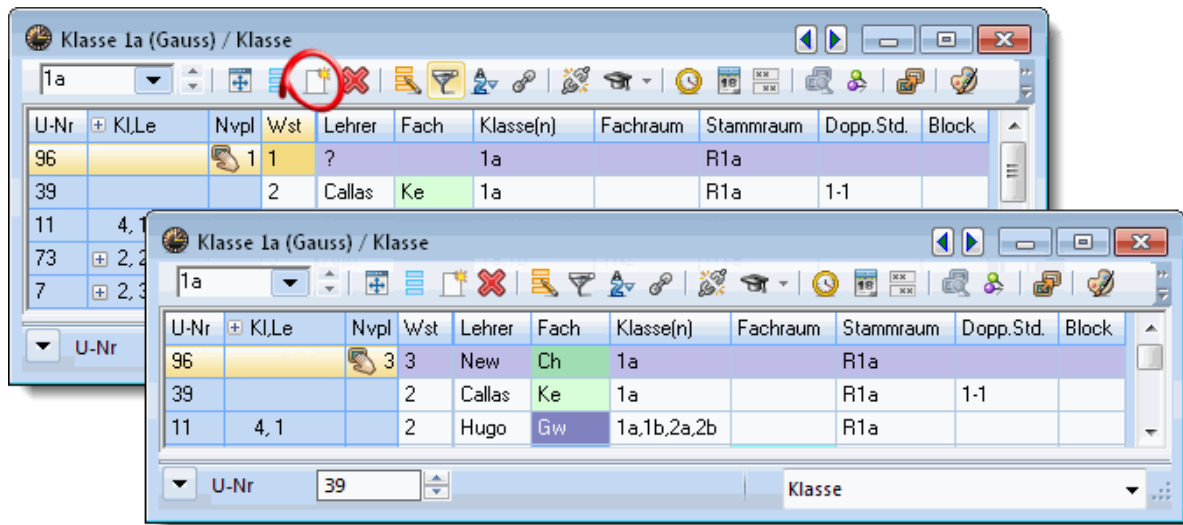
The value in the *Cl,Te* field indicates how many classes and how many teachers are involved in this lesson. A straightforward lesson involving one class and one lesson displays no value in this field.

U-Nr	± Kl,Le	Nvpl	Wst	Lehrer	Fach	Klasse(n)	Fachraum	Stammraum	Dopp.Std.	Block
39			2	Callas	Ke	1a		R1a	1-1	
11	4, 1		2	Hugo	Gw	1a,1b,2a,2b		R1a		
73	2, 2		3	Arist	SportM	1a,1b	Th2	R1a		
				Rub	SportK	1a,1b	Th1	R1b		

#### 3.1 Simple lessons

Open a lessons window and click on the <New> button. This will create a new lesson with one period per week. Alternatively, you can create a new lesson in the last row of the lesson view .

Simply enter all the elements involved for the lesson (class, teacher, subject, room) and if necessary change the number of periods per week.

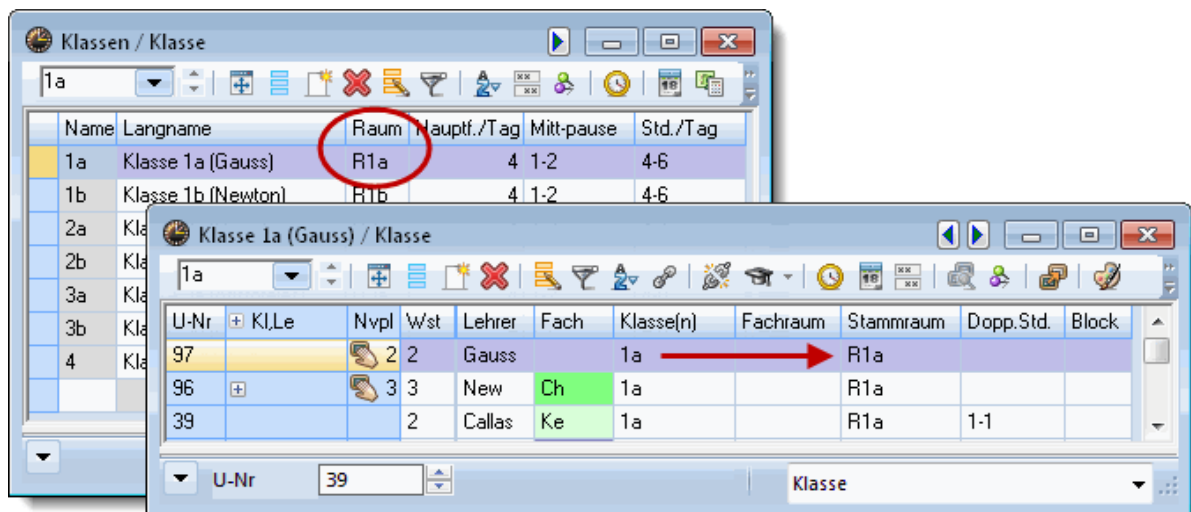


## Class / teacher

Depending on whether you have called 'Lessons | Classes' or 'Lessons | Teachers', the active class or the active teacher will be automatically entered for a new lesson.

## Home room

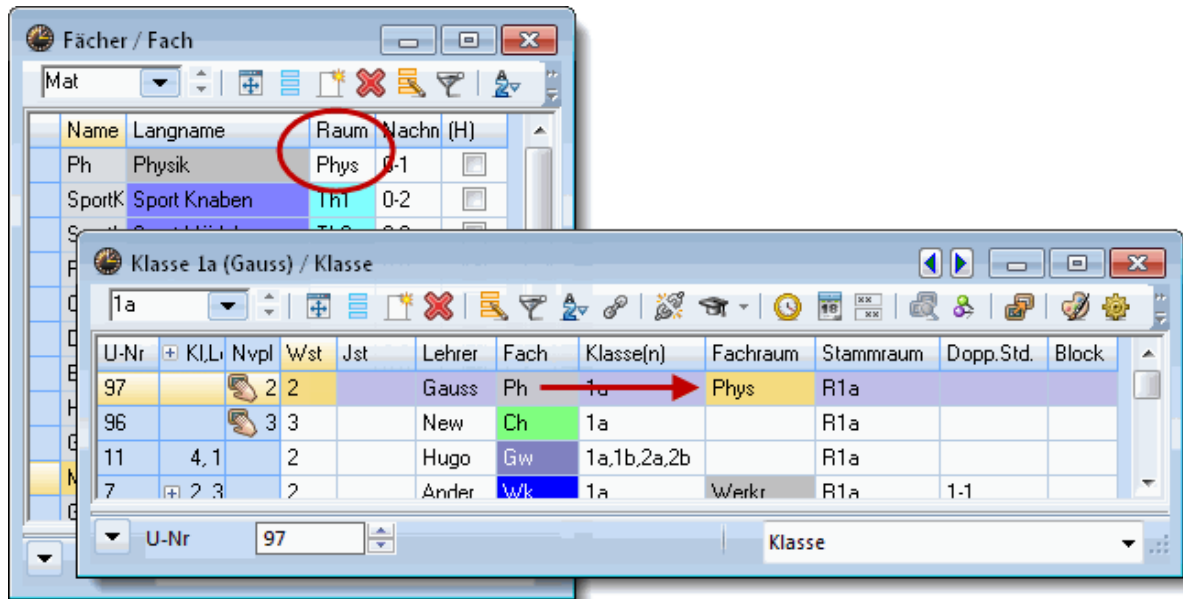
If you have assigned a room to each class under 'Master Data | Classes', the room will be entered automatically in the Home room field as soon as you enter the class. A teacher can also be assigned a home room, in which case the home room will be entered automatically in the same way.



## Subject room

You can also assign rooms under 'Master Data | Subjects'. However, in this case it involves subject rooms, for example a gymnasium for the subject *PE and sport*. When you enter a subject with a subject

room , the *subject room* will be displayed automatically in the corresponding field.



**Note: Subject room + home room**

A subject room and a home room can be entered for a lesson. In this case, optimisation will first try to schedule the lesson in the subject room. If this is not possible, the lesson can be scheduled in the home room. Please refer to chapter Room logic for further information.

## 3.2 Double period - block

### Double period

Lessons will be scheduled in single periods unless specified otherwise. Enter double periods in the column *Double pers.* if they are desired or permitted. Use this field to specify a 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.

U-Nr	Kl.Lr	Nvpl	Wst	Lehrer	Fach	Klasse(n)	Fachraum	Stammraum	Dopp.Std.	Block
39			2	Callas	Ke	1a		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).



U-Nr	Kl,Le	Nvpl	Wst	Lehrer	Fach	Klasse(n)	Fachraum	Stammraum	Dopp.Std.	Block
3	1,2		2	Gauss	Gz	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.

U-Nr	Kl,Le	Nvpl	Wst	Lehrer	Fach	Klasse(n)	Fachraum	Stammraum	Dopp.Std.	Block
62			4	Cer	E	3a		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.

## Block

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'.

U-Nr	Kl,Le	Nvpl	Wst	Lehrer	Fach	Klasse(n)	Fachraum	Stammraum	Dopp.Std.	Block
2			3	Callas	Ke	1b		R1b		3

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

U-Nr	Kl,Le	Nvpl	Wst	Lehrer	Fach	Klasse(n)	Fachraum	Stammraum	Dopp.Std.	Block
78			6	Ander	Wk	3b	Werkr	Ps1		3,3

## 3.3 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.

**Warning: General rule for 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.

## Coupled lessons (several classes)

Teacher Rubens is to teach cookery to classes 1a and 1b for two periods in the home economics room.

Per	Teacher	Subject	Class(es)	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 .

U-Nr	Kl,Le	Nvpl	Wst	Lehrer	Fach	Klasse(n)	Fachraum	Stammraum	Dopp.Std.	Block
96	2,1	2	2	Rub	Ko	1a,1b	Kü	R1a		
31			5	Arist	Mat	1a		R1a		
33			5	Arist	E	1a		R1a		

Now switch to class 1b. You will see that the lesson is automatically displayed for this class.

## Coupled lessons (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 in classes 2a and 2b will be taught in three sets by three teachers (Cer, Ander, Callas) in three different rooms.

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

1. Switch the lessons window to class 2a.
2. Enter '4' in the 'Per' column and confirm this by pressing <TAB>.
3. Enter the (short) name 'Cer' and confirm again with <TAB>. It does not matter which of the three teachers you begin with.
4. Enter 'EN' for subject.
5. Now enter classes 2a and 2b in the 'Class(es)' column separated by a comma.
6. Class 2a's home room – R2a – will be entered automatically.
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 grey.

U-Nr	+	Kl,Le	Nvpl	Wst	Lehrer	Fach	Klasse(n)	Fachraum	Stammraum	Dopp.Std.	Block
97	+	2, 1	4	4	Cer	D	2a,2b		R2a		
90				4	New	Mat	2a		R2a		

U-Nr		Kl,Le	Nvpl	Wst	Lehrer	Fach	Klasse(n)	Fachraum	Stammraum	Dopp.Std.	Block
97		2, 1	4	4	Cer	D	2a,2b		R2a		
90				4	New	Mat	2a		R2a		

- Now change the room from R2a to room R2b since teacher Cervantes will be teaching his group in room R2a .
- Make the same entries for teacher Callas in the third coupling row, making sure to enter a different room.

Klasse 2a (Hugo) / Klasse											
U-Nr	+	Kl,Le	Nvpl	Wst	Lehrer	Fach	Klasse(n)	Fachraum	Stammraum	Dopp.Std.	Block
97	+	2, 3	4	4	Cer	D	2a,2b		R2a		
					Ander	D	2a,2b		R2b		
					Callas	D	2a,2b		Ps1		
90				4	New	Mat	2a		R2a		
95				2	New	Ph	2a	Phys	R2a		

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

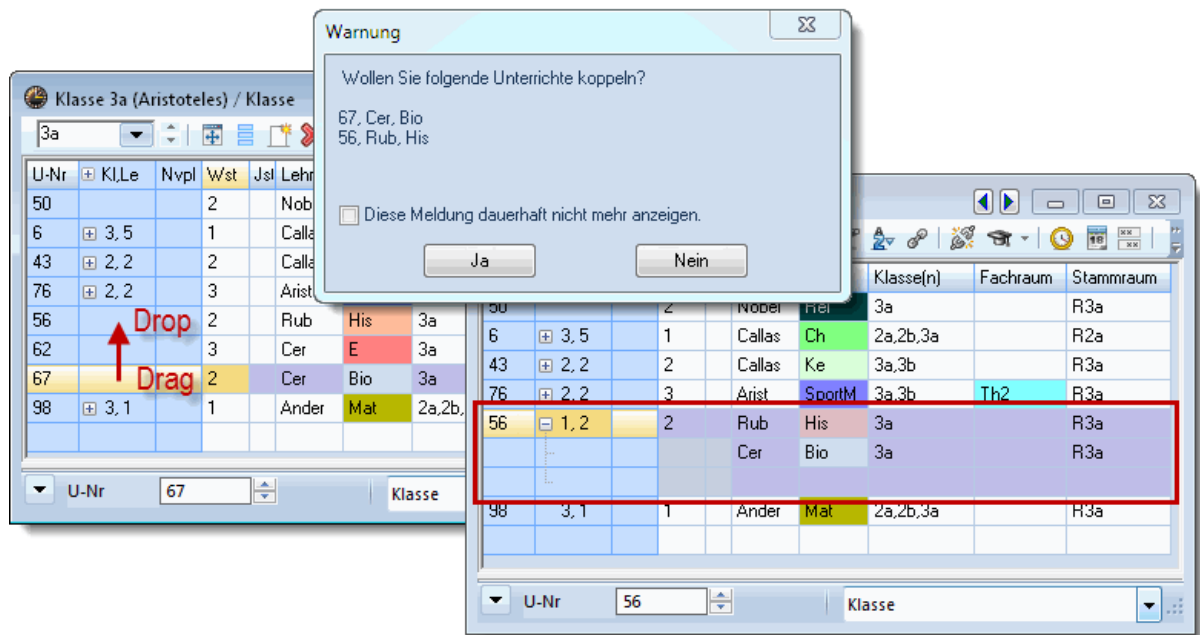
Clicking on <+> in the column heading of 'Cl,Te' will expand or collapse all coupling rows in one operation.

You can find further information on using coupled lessons in chapters [Coupling lessons](#) and [Decoupling lessons](#).

## 3.4 Coupling lessons

### Coupling using drag&drop

If you wish to couple two existing lessons, mark one of the lessons in the column 'Cl,Te' with the right mouse-button and drag it over to the lesson with which you wish to link it. When you release the dragged lesson, both lessons will be coupled.

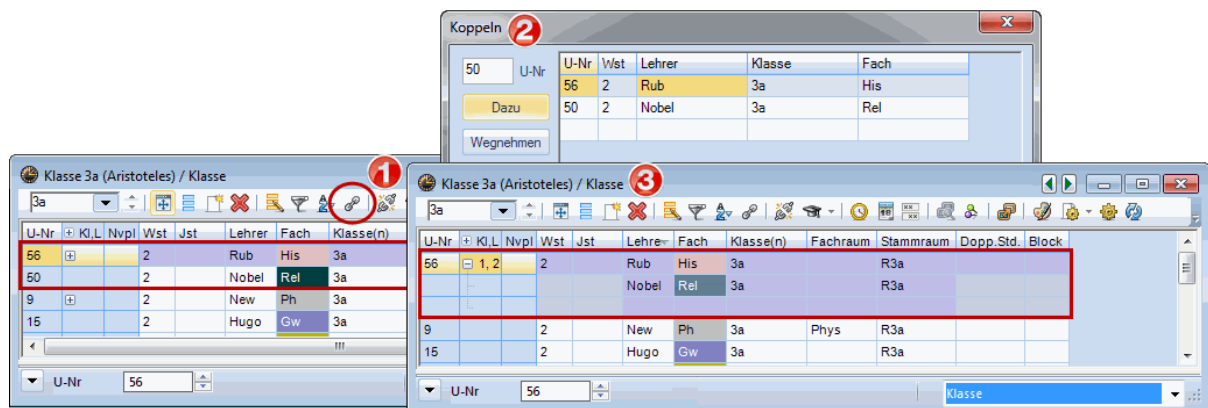


Decoupling coupled lessons is just as simple. Drag the coupling row that you wish to decouple out of the coupling by using the mouse in the 'Cl,Te' column and drop it. The lessons are now decoupled.

## Coupling via the toolbar

If you wish to couple two existing lessons, mark one of the lessons concerned and click on the <Create couplings> button in the toolbar. A dialogue window will be displayed already containing the marked lesson. There are three ways to add additional lessons:

- Double click on the lesson you wish to add in the lessons window.
- Mark the new lesson in the lessons window and then click on <Add>.
- Enter the lesson number and then click on <Add>.



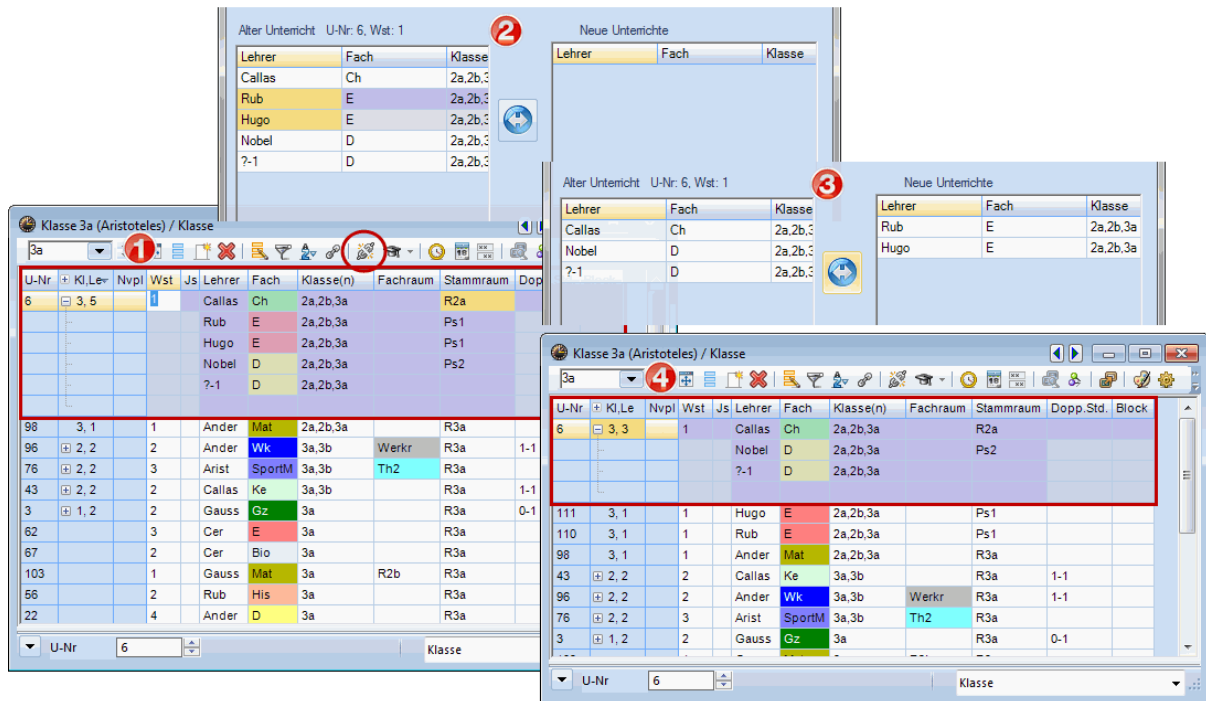
### 3.5 Decoupling lessons

The [previous chapter](#) described how you can decouple lessons using drag&drop.

#### Decoupling via button

This function allows you to convert individual [coupling rows](#) in a coupled lesson into lessons in their own right (with their own lesson numbers).

Mark a lesson coupling and click on the button <Extended decoupling>. A window will be displayed where you can select which coupling rows should be removed from the coupled lesson.



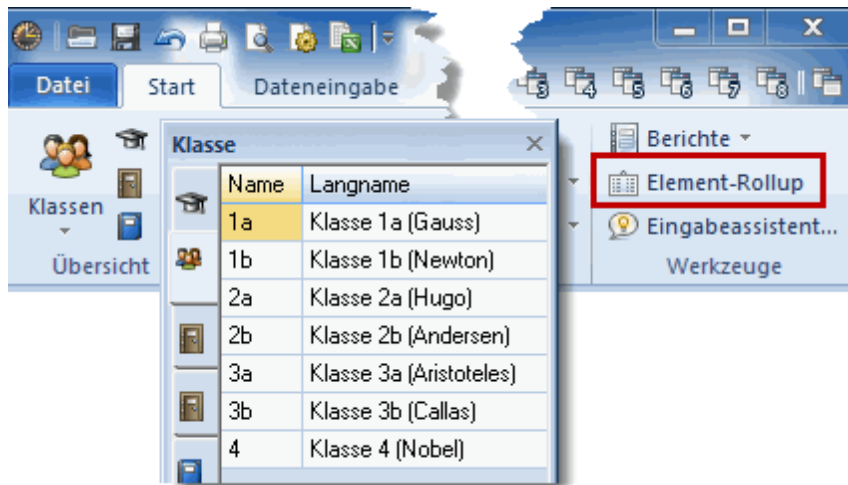
#### Warning: Split up all

Clicking on the <Split up all> button breaks up all class couplings. This can have a drastic impact on teaching load distribution.

If you only wish to split up a coupled lesson into all coupling rows but wish to retain the class couplings, mark all the rows concerned in the left section and click on the double-headed arrow in the centre of the window.

### 3.6 Entering lessons using drag&drop

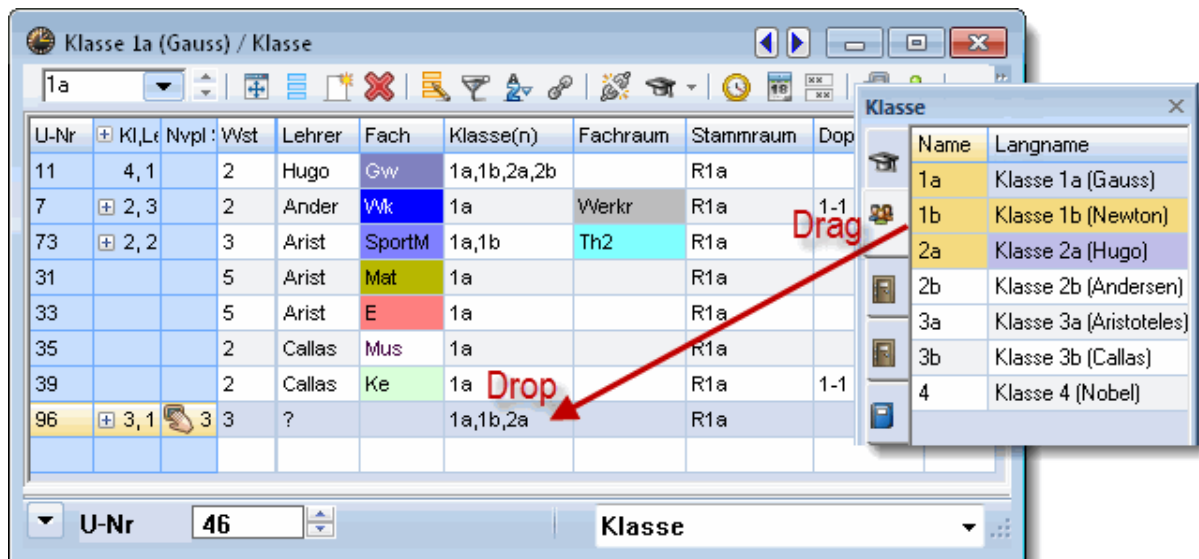
You can also use the Element-Rollup function to enter lessons using drag&drop. You can access the Element-Rollup function under 'Master Data | Element-Rollup' or via the button of the same name in the main toolbar.



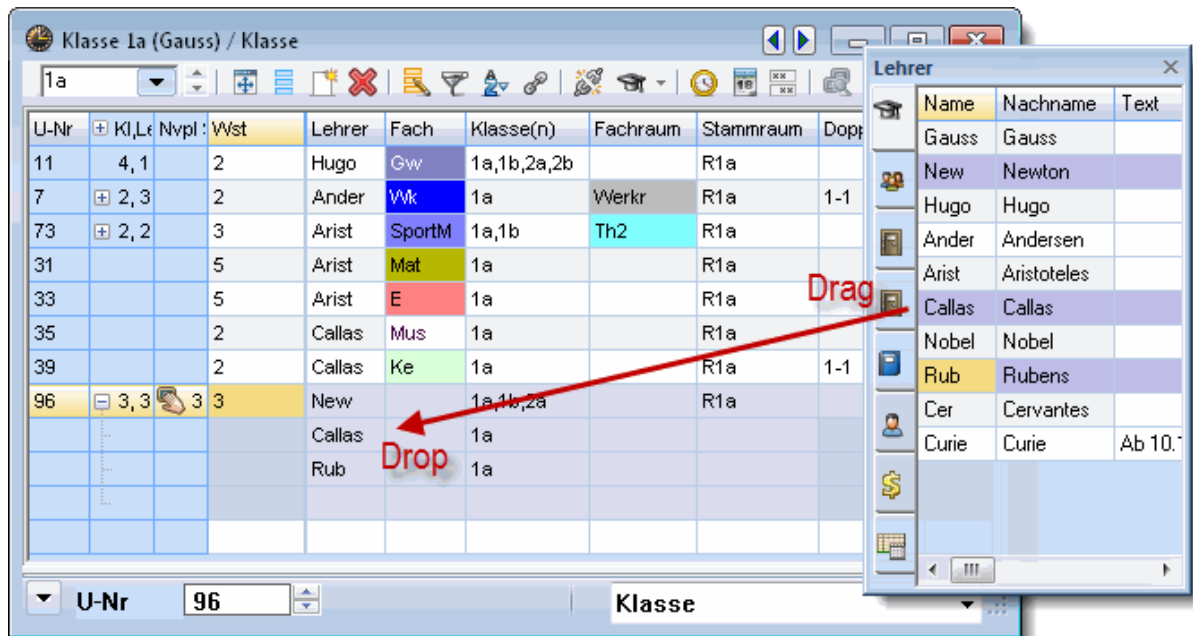
In the Element-Rollup window you can choose between master data types and drag one or several elements into the [lessons](#) window.

**Note: Several elements**

You can hold the <CTRL> key pressed and highlight several elements, which you can then drag into the lessons window together.



If you drag several classes into the lessons window, they will all be entered into one [coupling row](#). However, if you drag several teachers into an existing lesson, a separate coupling row will be created for each teacher.



**Note: Double-click**

You can use a double click in the element window instead of the drag&drop method.

### 3.7 Clipboard

You can copy selected (highlighted) lessons to the clipboard. These functions can be accessed under menu item 'Edit', or you can use the following shortcuts:

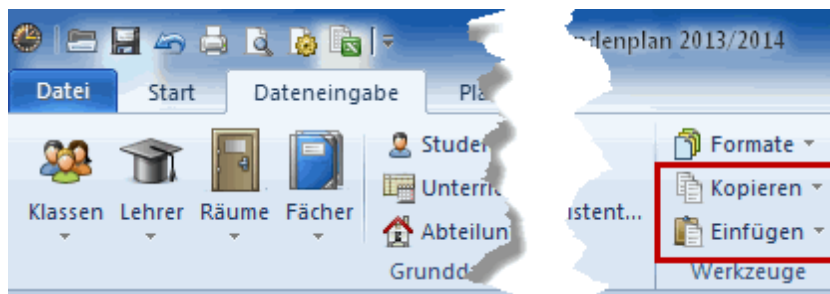
- CTRL + X = Cut
- CTRL + C = Copy
- CTRL + V = Paste

#### Programme-internal use

The clipboard function allows you to copy one or more lessons of one class to another or from one term> to another (with the Multiple term module).

If you wish for example to copy all lessons from class 1a to class 1b

- highlight all lessons,
- select 'Edit | Copy',
- switch to class 1b (which still has no lessons) and
- select 'Edit | Paste'.



## Paste special

### Tip: Copying timetables

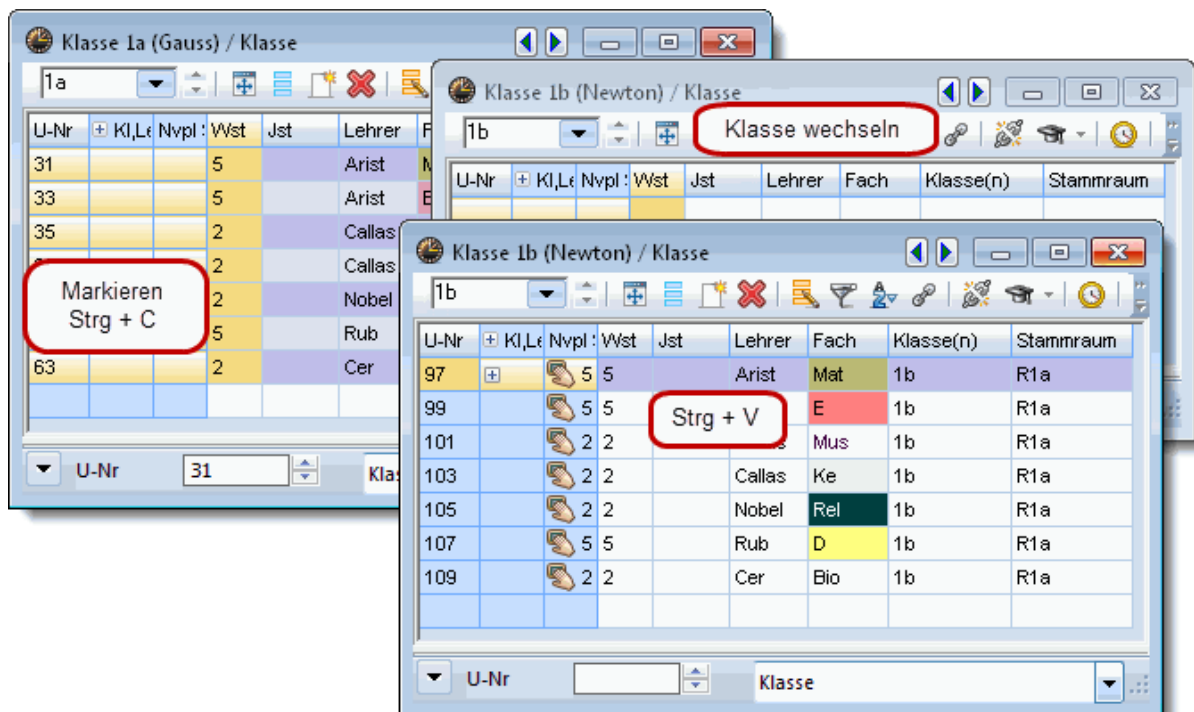
The 'Paste special' functions allows you to copy timetables.

In addition to the usual paste function, the 'Edit' menu also provides the 'Paste special' function. Besides inserting lessons, this function also inserts the timetable of the copied lessons, i.e. the timetable of the source class is also copied.

## Copying data to external programmes

You can also use the clipboard to export lessons (or other data) to external programmes such as spreadsheets or word processors.

Many views also offer the <Print in Excel> option allowing you to export directly to a spreadsheet.





## 4 Lesson properties

You can specify many additional properties for lessons apart from the basic data. With the exception of time requests you can enter this data either in the grid view or in the form view. You will find all the tabs described below in the [form view](#) .

- [Time requests](#)
- ['Lessons' tab](#)
- ['Timetable' tab](#)
- ['Codes 1' tab](#)
- ['Codes 2' tab](#)
- ['Values' and 'Coupling lines' tabs](#)

### 4.1 Time requests of lessons

You can choose between three different ways of displaying time requests:

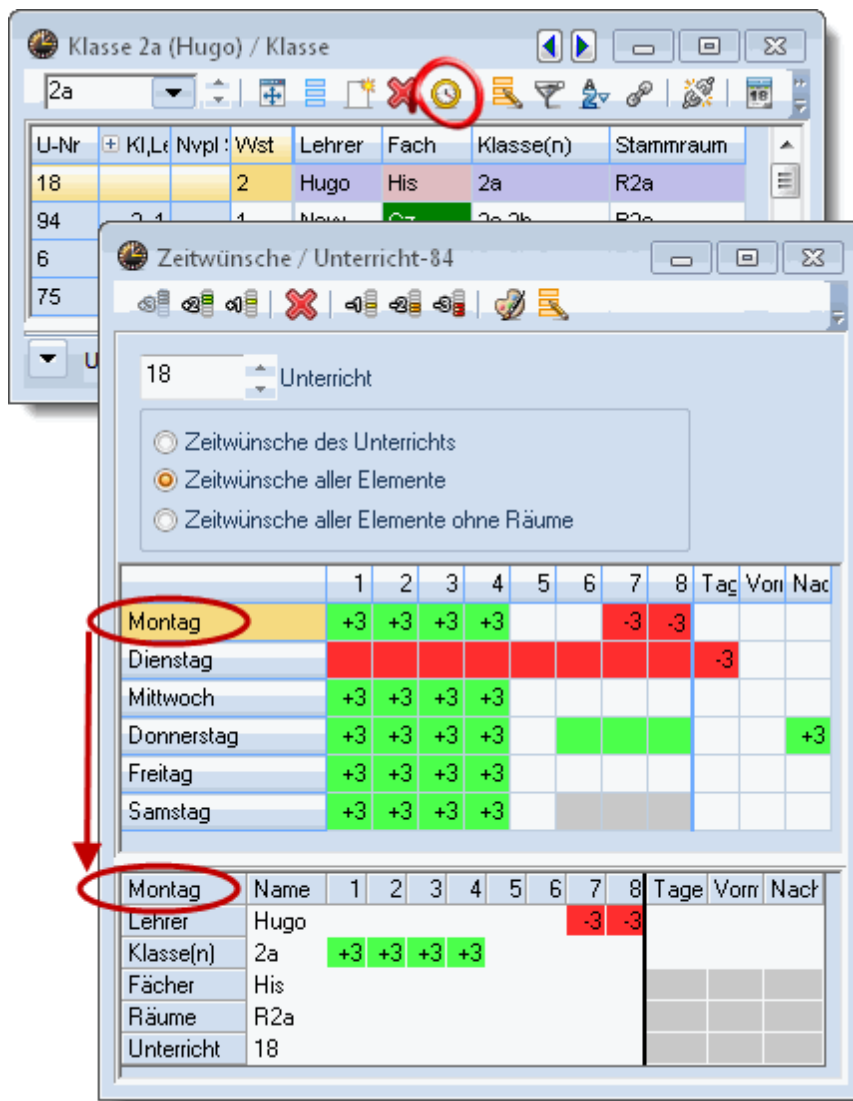
#### **Time requests of lessons**

Each individual lesson can be assigned a special time request. The general time request function is described in chapter Time requests in the User tips section. However, a time request for a lesson cannot be given the value +3. In this case, you should schedule the lesson manually and lock it.

#### **Time requests for all elements**

Lessons inherit the time requests of the master data involved . For example, if Victor Hugo's free day is Tuesday, no lesson can take place on a Tuesday if Hugo is involved.

The 'Time requests for all elements' option displays the time requests for all elements involved in this lesson in the centre of the window. You can click on a day of the week in this section and the lower section will indicate exactly which of the elements involved is responsible for the time request.



### Time requests without rooms

Since room allocation can still be changed during optimisation, time requests for rooms are not as stringent as those for other elements. For this reason they can be hidden using the lower option.

## 4.2 'Lessons' tab

You can specify the following settings on the 'Lessons' tab:

Unterricht		Stundenplan		Kennzeichen		Werte		Kopplungszeile	
2	Wochenstunden		Alias-(Zweit)Name		Fachgruppe				
	Jahresstunden		Beschr.		Studenten				
Hugo	Lehrer		Raum		Studentinnen				
His	Fach	R2a	Stammraum	0	Gesamt				
2a	Klasse(n)		Statistik-Kennzeichen		Studenten Min				
	Teilungs-Nr.		U-Gruppen		Studenten Max				
	Schülergruppe	<input type="checkbox"/> Std. auf U-Gruppen verteilen			Stud. Kurs				
			Text						
			ZeilenText						
			ZeilenText-2						

### Periods/week / Years periods, Teacher, Subject, Class(es), Room

The master data involved in the lesson together with the number of periods are the essential lesson parameters. Entering data was dealt with in chapter [Entering lessons](#).

### Division number

The division number is required to ensure that the number of periods for a class are calculated correctly for divisions. A division occurs when for example English is taught in 2 groups but the lessons are not coupled, i.e. do not take place simultaneously. There are then two lesson rows each with 4 periods, but only 4 hours count towards the total number of class periods.

If both lesson rows (numbers) are assigned the same division number (permitted range of values: 0 to 255) the value units will be calculated as described above. A lesson with a division number of 0 will not count towards the total number of periods for the class.

You can assign the same division number for more than 2 lesson rows of the class. The largest number of periods covered by the division number will then count towards the class total.

### Alias name

You can assign an alias to lessons in the same way as for master data elements. Please refer to chapter Master data – Class tab for a description of this function.

### Room

This is where you can enter the desired (subject) room for the lesson. If a subject room has been defined for a subject, it will be automatically used when the lesson is created.

### Home room

If data is being entered in the view 'Lessons | Classes', the class' home room will be displayed here; if data is being entered in the view 'Lessons | Teachers', the teacher's home room will be displayed here.

### Les. groups

You can enter the lesson group here if you use the Multi-week timetable module. Please refer to chapter Lesson groups in section Multi-week timetable.

### Statistical code

Used in the same way as with master data. You can assign any number of statistical codes to each lesson. These codes are very useful when you wish to filter according to specific criteria.

### Subject group

If the lesson subject is assigned to a subject group, it will be displayed here. The use of subject groups is primarily of interest in connection with teacher qualifications and the lesson table (with module Lesson planning ).

### Students M./Students F./Total

This is where you can enter the number of students (male and female) participating in the current lesson. The total of all entries is displayed in the total field. These entries have an influence on room allocation during optimisation and room optimisation .

### Text

This field allows you to assign text of your choice to each lesson. This text is also displayed in the 'Special text' column of the timetable details window and can also be displayed in the timetable window itself .

U-Nr	Kl,Le	Nvpl	Wst	Lehrer	Fach	Klasse(n)	Text	Dopp.Std.
45			2	Callas	Ke	4	Basteln	1-1
5				Mat.				
6								
7				Ke				
8				Basteln				
				Ph				
U-Nr	Lehr., Fa., Rm.					Kla.	Z	
26	Ander, Mus, R2a (Ps2)					4		
+3								

### Line text / Line text -2

You can use these fields to assign text to the individual [coupling rows](#) of a lesson.

## 4.3 'Timetable' tab

You can specify the following settings on the 'Timetable' tab:

### Double periods Min. Max.

Entering double periods and blocks was already dealt with in chapter [Double period - block](#) .

### Periods in this subject room

If a subject room is defined for a lesson, the optimisation routine will attempt to schedule all periods of the lesson in this room. This is sometimes not desired when there is a shortage of rooms or when rooms are overbooked. If for example only two of three physics lessons are to be held in the physics lab, then enter a '2' here. As a rule, no entry is required in this field.

### Scheduling priority

When you launch optimisation, Untis will first calculate the level of difficulty for all lesson periods. A lesson is all the more difficult to place if there are a lot of elements involved in it and if there are restrictive time requests specified for the elements.

The algorithm that Untis uses to place a lesson starts with the most difficult periods first. You have the chance to influence the scheduling sequence by setting a scheduling priority. The smaller the number entered for the priority (1-9) the earlier the lesson will be placed and the greater the likelihood of finding a 'good' position.

If this field is left empty, a default priority of 5 will be assumed; values of 1-4 increase priority while values of 6-9 decrease it. Lessons with a scheduling priority of 9 will be processed last while those with a priority of 1 will be treated first.

#### Warning:

An entry in this field can have a drastic influence on the way optimisation works. As a general rule, it can have a negative impact on the overall result, which is why it should only be used for good reason and with due consideration.

### Teacher optimisation code

With the teacher optimisation code, the Lesson planning module offers the possibility of influencing Teacher assignment during optimisation. You will find details in chapter Teacher optimisation under Optimisation .

### Unscheduled periods

This value indicates how many periods of the current lesson have not yet been scheduled in the timetable.

### Time range

The Multi-week timetable module allows you to set time restrictions for lessons.

### Subject sequence - Classes/Subject Sequence - Teachers

As with master data, there is also the field subject sequence for lessons. Permitted entries are 1 - 9 for a positive subject sequence and A - E for a negative subject sequence. Please also see chapter Subject sequence in the User tips section.

### Class Clash Code (Class Clash Code, CCC)

This code allows Untis to schedule two lessons at the same time even when the same class is involved in both lessons. Enter values 1 - 9 where a conflict is permissible between lessons with the same CCC, and A - H where a conflict is permissible between lessons with different non-numeric CCCs. Please also see chapter Subject sequence in the User tips section.

## 4.4 'Codes' tab part 1

There is a large number of codes available with which you can define lessons more precisely.

Unterricht	Stundenplan	Kennzeichen	Werte	Kopplungszeile
<input type="checkbox"/> (X) Fixiert		<input type="checkbox"/> (B) Bedingt fixieren		
<input type="checkbox"/> (i) Ignorieren		<input type="checkbox"/> (D) Doppelstunden einhalten		
<input type="checkbox"/> (m) Markiert		<input type="checkbox"/> (C) keine Einzelstunden		
<input type="checkbox"/> (E) Doppelst. über *-Pausen		<input type="checkbox"/> (R) Randstunde		
<input type="checkbox"/> (F) Freifach		<input type="checkbox"/> (S) Kl.gruppe später planen		
<input type="checkbox"/> (G) Nicht in Randstunde		<input type="checkbox"/> (2) Fach auch 2x / Tag		
<input type="checkbox"/> (K) Kein Ausweichraum		<input type="checkbox"/> (V) Variabler Lehrer		
<input type="checkbox"/> (k) Keine Datenanalyse		<input type="checkbox"/> (L) Nicht in Legende		
<input type="checkbox"/> (r) St. im selben Raum		<input type="checkbox"/> (U) Am Nachm. nur Doppelstd.		
<input type="checkbox"/> Lehrerzuord fix		<input type="checkbox"/> (M) manuell verplanen		
<input type="checkbox"/> Zeitwünsche vorhanden		<input type="checkbox"/> Vtr.: Betreuer automatisch		

### (X) Locked, (i) Ignore, (m) Marked

The way these codes work was already explained in chapter Input fields for master data .

In lesson views, ignored lessons are marked with the letter (i) next to the lesson number.

U-Nr	Kl,Le	Nvpl	Wst	Lehrer	Fach	Klasse(n)
33			5	Arist	E	1a
35	(i)		2	Callas	Mus	1a
39	(i)		2	Callas	Ke	1a
46			2	Nobel	Rel	1a
53	+	2	5	Rub	D	1a

### (E) Double pers. span \*-breaks

Double periods are not allowed to span breaks, which are marked in the timetable with a '\*'. Use the (E) code to deactivate this restriction for specific lessons.

### (O) Optional subject

Lessons for which this code is activated are treated during optimisation as if an optional subject were involved. For further details, please refer to chapter User tips – Optional subjects and fringe periods .

### (G) No fringe period placement

Activate this code if a particular lesson should not be scheduled in a fringe period. For further details, please see chapter User tips – Optional subjects and fringe periods .

### (K) No altern. room to be used

Lessons marked (K) may only be scheduled in the designated room. Scheduling in alternative rooms is not allowed.

### (k) Exempt from data analysis

Use this code to exclude a lesson from the automated data analysis function of the diagnosis tool.

#### Warning:

Activate this function only when you have made sure that the lesson in question will not obstruct the optimisation tool.

### (r) All prds. in the same room

All periods of a lesson marked with this code will take place in the same room. This code has a major influence on room optimisation. A lesson marked with the (r ) code can even displace a class from its own home room. Please read chapter User tips – Room logic for further details before attempting to use this function.

### Teacher allocation locked

The teacher assigned to teach a class can be locked separately for each coupling line to ensure that the placement cannot be changed by the automated teacher allocation function (only possible with the 'Lesson planning and value calculation' module) (please see also chapter Optimisation ).

### Time requests

This box will be automatically checked if time requests have been entered for this lesson.

## 4.5 'Codes' tab part 2

Below is a description of the codes in the second column.

Unterricht	Stundenplan	Kennzeichen	Werte	Kopplungszeile
<input type="checkbox"/> (X) Fixiert		<input type="checkbox"/> (B) Bedingt fixieren		
<input type="checkbox"/> (i) Ignorieren		<input type="checkbox"/> (D) Doppelstunden einhalten		
<input type="checkbox"/> (m) Markiert		<input type="checkbox"/> (C) keine Einzelstunden		
<input type="checkbox"/> (E) Doppelst. über *-Pausen		<input type="checkbox"/> (R) Randstunde		
<input type="checkbox"/> (F) Freifach		<input type="checkbox"/> (S) Kl.gruppe später planen		
<input type="checkbox"/> (G) Nicht in Randstunde		<input type="checkbox"/> (2) Fach auch 2x / Tag		
<input type="checkbox"/> (K) Kein Ausweichraum		<input type="checkbox"/> (V) Variabler Lehrer		
<input type="checkbox"/> (k) Keine Datenanalyse		<input type="checkbox"/> (L) Nicht in Legende		
<input type="checkbox"/> (r) St. im selben Raum		<input type="checkbox"/> (U) Am Nachm. nur Doppelstd.		
<input type="checkbox"/> Lehrerzuord fix		<input type="checkbox"/> (M) manuell verplanen		
<input type="checkbox"/> Zeitwünsche vorhanden		<input type="checkbox"/> Vtr.: Betreuer automatisch		

### (B) Lock conditionally

Lessons marked with this code are treated as locked lessons during the first part of the optimisation run (placement run). During the subsequent optimisation run (swap run), however, the temporary locking function is automatically deactivated (please see also chapter Optimisation )

### (D) Respect double periods

Activate this function for a lesson (or a subject) if you wish the optimisation tool to adhere strictly to the number of permitted (desired) [double periods](#) . This also applies when double periods have been excluded for a lesson ('0-0' in the field 'Double periods min., max.'). The function is particularly useful when the optimisation errors 'Double per. split up', 'Unrequ. double pers. ' and 'Subject twice a day' are to be avoided at all costs.

#### Warning: Use sparingly

Please use this code sparingly (if in doubt, please do not use it at all), since it places severe restrictions on optimisation – especially for subjects with a large number of periods. If necessary, increase the corresponding weighting parameters ( Avoid errors with double period ) to 5 before using it.

- Please also note that to ensure the correct treatment of double periods, data must be entered in the 'Double periods min, max' field.
- Setting the (D) code excludes the use of codes (2) and (C).

### (C) No single periods

Setting the (C) code gives priority to scheduling the lesson in questions as block. Single periods will be avoided if at all possible.

- This code is only useful for lessons with more than 6 periods per week.
- Codes (2), (C) and (D) are mutually exclusive.

### (R) Place in a fringe period

Use this option to specify lessons that should be scheduled in fringe periods in the same way as fringe lessons. The attribute ensures that lessons marked in this way are scheduled preferentially at the beginning or the end of a school day or half-day (depending on the timetable). Please also refer to



chapter User tips / Fringe periods and optional subjects .

### **(S) Schedule class group later**

You can change the scheduling priority for the lessons when using class groups . The code instructs the optimisation tool to leave the scheduling of these lessons until after other classes of the same class group have been scheduled.

- Use this code only when you are familiar with working with class groups.

### **(2) Subject more than once/day**

The Untis optimisation algorithm assumes that a subject should only be scheduled once a day for any one class (except [block lessons and double periods](#) ). You can use this flag to override this – highly weighted – boundary condition. Untis will then be allowed to schedule the subject as it thinks fit.

- The options (2), (C) and (D) are mutually exclusive.

### **(V) Variable teacher**

When this code is set Untis may replace the teacher(s) involved in the lesson with more suitable teachers when bottlenecks are encountered during optimisation. Please refer to chapter Optimisation for further details.

### **(L) Not in Legend**

No legend will be printed for lessons where this code is set.

### **(U) p.m. only double periods**

This code ensures that the automated optimisation function will only schedule double periods (and no single periods) in the afternoon. This code only makes sense when

- double periods are permitted for the lesson and
- the subject is marked as a subject that can take place in the afternoon.

### **(M) Schedule manually**

Lessons marked (M) are ignored by the optimisation tool. These lessons must be scheduled manually.

## **4.6 'Values' and 'Coupling line' tabs**

### **'Values' tab**

This tab will only be displayed with the module Lesson planning and value calculation . Please refer to chapter Values under Value calculation for details on the fields.

### **'Coupling line' tab**

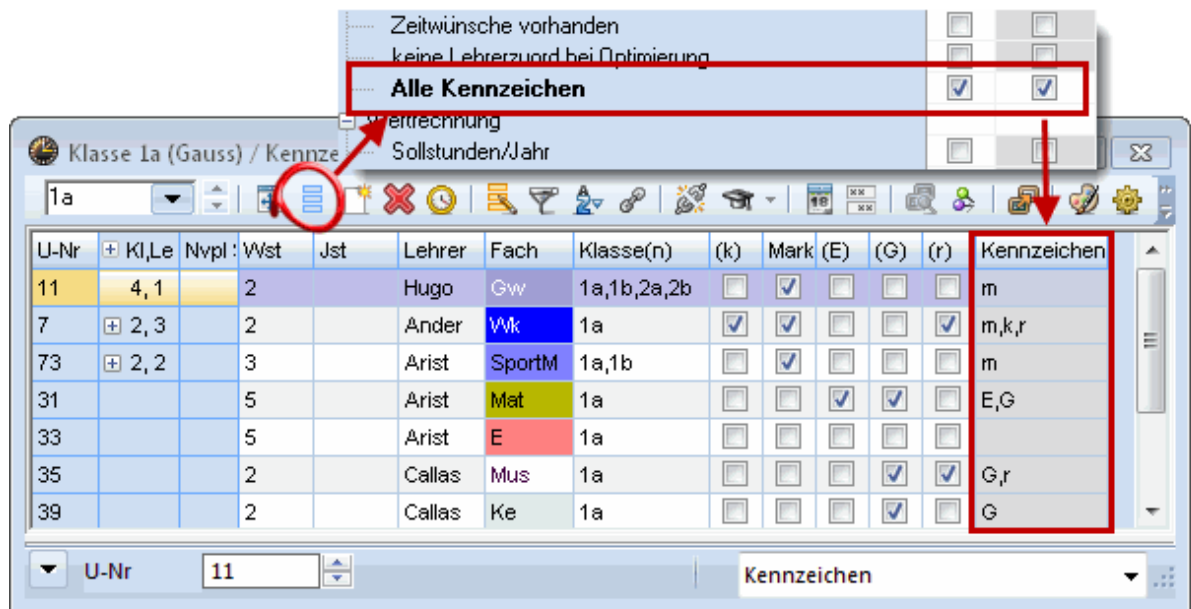
This tab contains fields that are only relevant for a coupling line but not for the entire coupled lesson. Most fields can be found on the ['Lessons' tab](#) and are described there.

The fields 'Teacher allocation locked' and '(Teacher)' are described in chapter Automatic teacher assignment during optimisation under Lesson planning.

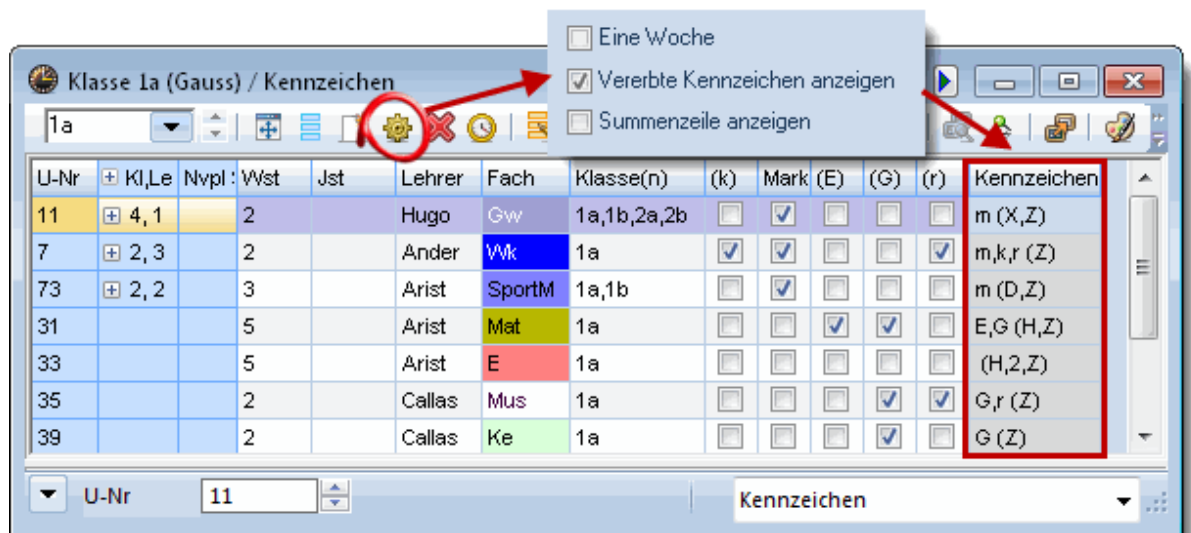
## **4.7 All codes**

This field, which can only be activated in the grid view via the <Grid Adjustment> button, offers an excellent overview of the relevant timetable settings of a lesson. The 'Code' column clearly and comprehensively displays all the codes set for a lesson. The code Z denotes lessons where a time

request has been entered.

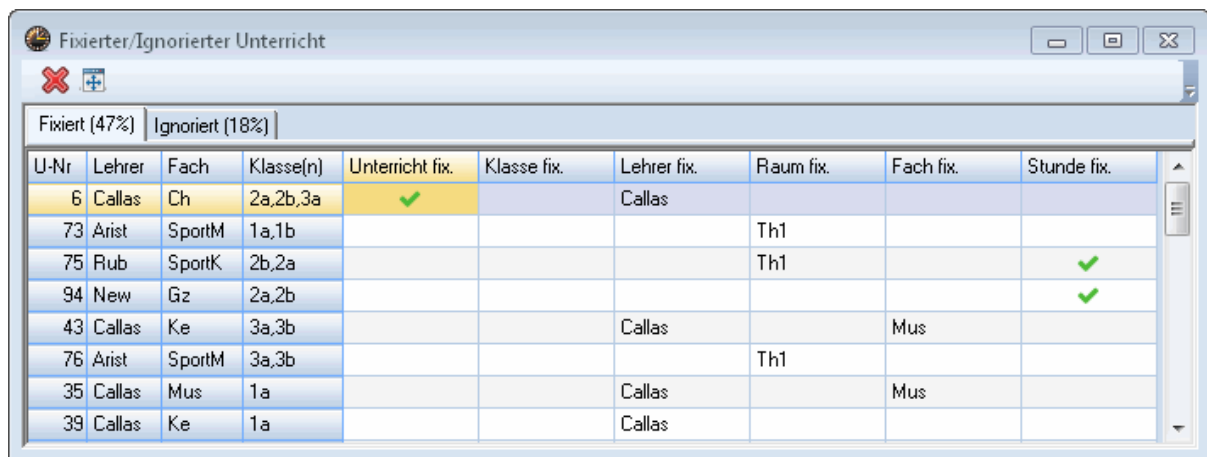


Check the relevant box under <Settings> in this lessons window if you wish inherited codes, i.e. codes entered for a master data element of these lessons, to be displayed in parentheses.



## 4.8 Locked lessons

The menu item 'Lessons | Locked lessons' allows you to open a window listing all locked lessons. It is irrelevant if the lessons in question have been locked as individual periods, as lessons or via another element or lesson group.



The screenshot shows a window titled 'Fixierter/Ignorierter Unterricht'. It has a toolbar with a red 'X' and a blue plus sign. Below the toolbar, there are two tabs: 'Fixiert (47%)' and 'Ignoriert (18%)'. The 'Fixiert' tab is active, displaying a table with the following columns: U-Nr, Lehrer, Fach, Klasse(n), Unterricht fix., Klasse fix., Lehrer fix., Raum fix., Fach fix., and Stunde fix. The table contains 9 rows of lesson data.

U-Nr	Lehrer	Fach	Klasse(n)	Unterricht fix.	Klasse fix.	Lehrer fix.	Raum fix.	Fach fix.	Stunde fix.
6	Callas	Ch	2a,2b,3a	✓		Callas			
73	Arist	SportM	1a,1b				Th1		
75	Rub	SportK	2b,2a				Th1		✓
94	New	Gz	2a,2b						✓
43	Callas	Ke	3a,3b			Callas		Mus	
76	Arist	SportM	3a,3b				Th1		
35	Callas	Mus	1a			Callas		Mus	
39	Callas	Ke	1a			Callas			

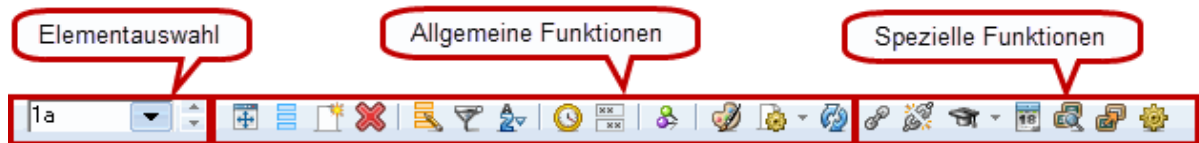
You can remove locked lessons from the window by clicking on the cell in question and then clicking on the <Delete> button in the toolbar.

**Note:**

It is not enough to select the row in question – you must click on the cell in the row that causes it to be locked. You can read more about locking in chapter [Locking in the User tips section](#).

## 5 Toolbar functions

The general functions are explained in chapter [Master data / Toolbar functions](#).



You will only find the following special functions in the lessons window:

### Create coupling

Please refer to chapter [Coupling lessons](#).

### Extended decoupling

Please refer to chapter [Decoupling lessons](#).

### Teacher suggestion

Please refer to chapter [Teacher suggestions](#) under Lesson planning.

### Calendar

You can use the Multi-week timetable module to specify time restrictions for master data elements and lessons, and define lesson groups (time ranges). The school year calendar displays the selected lesson in green for the period in which the lesson can be held.

U-Nr	Kl,Le	Nypl	Wst	Jst	Lehrer	Fach	Klasse(n)	U-Gruppen	UC	Von	Bis
31			5		Arist	Mat	1a	Woche A	<input type="checkbox"/>	03.10.	05.05.
63			2		Cer	Bio	1a		<input type="checkbox"/>		

	Mo	Di	Mi	Do	Fr	Sa	So	Mo	Di	Mi	Do	Fr	Sa	So	Mo	Di	Mi	Do	Fr	Sa	So	Mo	Di	Mi	Do	Fr	Sa	So	Mo	Di	Mi	Do	Fr	Sa	So	Mo	Di
September								2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Oktober		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					
November				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30				
Dezember						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Januar			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
Februar						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28				
März						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
April		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30						
Mai				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Juni						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29			

## Lesson comparison

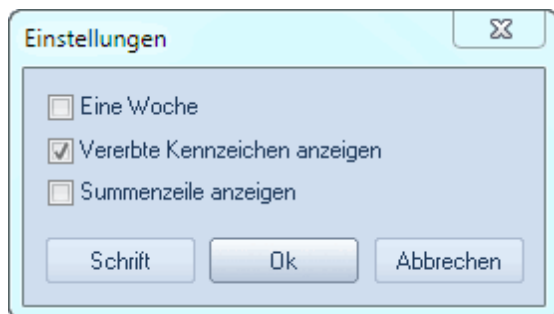
Please refer to chapter Lesson comparison under Lesson planning .

## Convert lesson(s) into course(s)

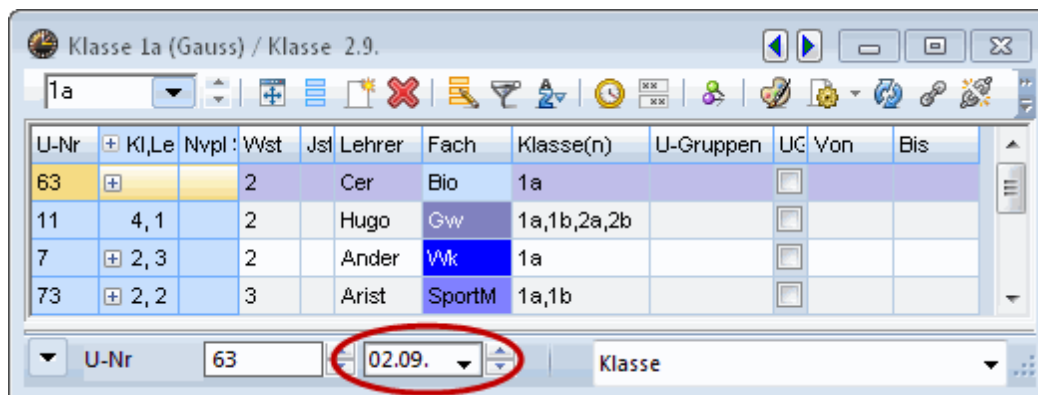
Please refer to chapter Specifying courses under Course scheduling

## Settings

You can select <Settings> to tailor the grid view of the [lesson window](#) to your requirements.

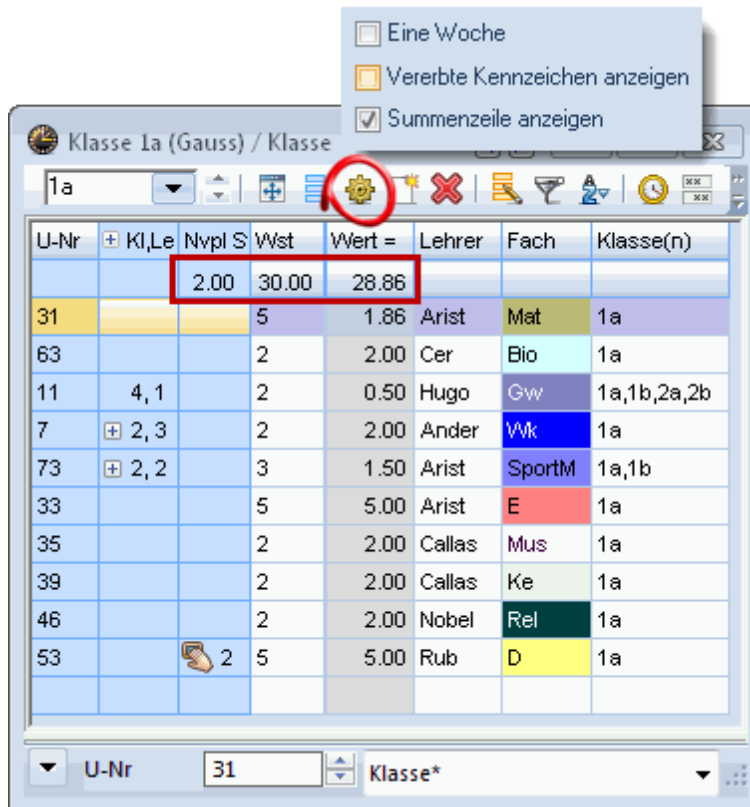


- **One week** - This check box is only activated if you use the Multi-week timetable module. Only those lessons taking place in a specific week will be displayed.



- **Show inherited codes** - This option affects the codes field. Please refer to chapter [Displaying codes](#)

- **Show total** - Use this setting to display a row with totals below the header row in the grid view. The value of individual fields will be totalled for numeric fields.



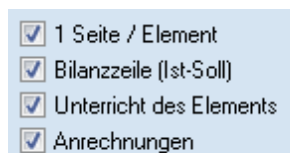
**Tip: Context menu**

You can also display the totals row by right-clicking on the header row.

## 6 Printing

The print function in the lesson views works in exactly the same way as the print function in the master data views .

The <Details> window under print selection offers additional settings that are only relevant for lessons.



**1 Page / Element**

This option allows lessons of the various elements ( Teachers or classes ) to be printed on separate pages.

### Balance (Target-Actual)

This option prints a balance row. This function is only possible in combination with the module Lesson planning and value calculation .

### Lesson on one line

In the case of [coupled lessons](#) , this option deactivates the printing of rows that are not relevant for the active element.

- ☐ 1 Seite / Element
- ☐ Bilanzzeile (Ist-Soll)
- ☐ Unterricht des Elements
- ☐ Anrechnungen

Gauss Gauss

U-Nr	Kl,Le	Nvpl	Std.	Wst	Jst	Lehrer	Fach	Klasse(n)
6	3, 7	1				Callas	Ch	2a,2b,3a
						Gauss	Mat	2a,2b,3a
						Ander	Mat	2a,2b,3a
						Rub	E	2a,2b,3a
						Hugo	E	2a,2b,3a
						Nobel	D	2a,2b,3a
						?-1	D	2a,2b,3a
7	2, 3	2				Ander	Vwk	1a
						Gauss	Vwk	1b
						Curie	Tw	1a,1b
1		4				Gauss	Mat	3a
3	1, 2	2				Gauss	Gz	3a
						Curie	Tw	3a
4	1, 2	2				Gauss	Gz	3b
						Curie	Tw	3b
5		2				Gauss	Gz	4
82	1, 2	4				Ander	Mat	4
						Gauss	Mat	4

New Newton

U-Nr	Kl,Le	Nvpl	Std.	Wst	Jst	Lehrer	Fach	Klasse(n)
94	2, 1	1				New	Gz	2a,2b

- ☒ 1 Seite / Element
- ☒ Bilanzzeile (Ist-Soll)
- ☒ Unterricht des Elements
- ☒ Anrechnungen

Gauss Gauss

U-Nr	Kl,Le	Nvpl	Std.	Wst	Jst	Lehrer	Fach	Klasse(n)
6	3, 7	1				Gauss	Mat	2a,2b,3a
7	2, 3	2				Gauss	Vwk	1b
1		4				Gauss	Mat	3a
3	1, 2	2				Gauss	Gz	3a
4	1, 2	2				Gauss	Gz	3b
5		2				Gauss	Gz	4
82	1, 2	4				Gauss	Mat	4

### Anrechnungen

Wert	Grund	Text	Von	Bis	Beschr.
8.00	Direktion				Administrative Tätigkeit
1.00	EDV-Kustos				Administrative Tätigkeit
9.00		Summe			

26.00 (Ist+Anr.) - 22.00 (Soll) = 4.00

### Reductions

The Reductions option only makes sense in combination with the module Lesson planning .

### Period time requests

The print selection dialog also allows you to print out period time requests ( Time requests ) for individual lessons.

Name	Mo								Di								Mi								Do								Fr								Sa				
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5
11									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
6	-	3							-	3							-	3							-	3							-	3							-	3	3	3	3
18	+	2			-	-	-	-	+	2			-	-	-	-	+	2			-	-	-	-	+	2			-	-	-	-	+	2			-	-	-	-	+	2	3	3	3

## 7 Lesson sequences

You can use the lesson sequence function, called via 'Lessons | Lesson sequences', to influence how lessons are scheduled. There are three different types of lesson sequence:

- [Fixed \(subject\) sequences](#)
- [Simultaneous lessons](#)
- [Sequence in a week](#)

### 7.1 Fixed (subject) sequence

3 Use the fixed subject sequence to specify the periods that must be scheduled in sequence.

Access '[Lessons|Lesson sequences](#)', set the drop-down list at the top right to *Fixed sequence* and enter the lessons that are to be scheduled in sequence.

#### Example

The physics theory lesson for class 1a, lesson 96, should immediately precede practical physics, lesson 97. Once the subject sequence has been specified, Untis will now schedule the periods to take place sequentially.

Klasse 1a (Gauss) / Klasse

U-Nr	Kl,Le	Nypl	Wst	Jst	Lehrer	Fach	Text	Klasse(n)
96			1		Gauss	Ph Th	Theorie	1a
97			1		New	Ph La	Labor	1a

Unterrichtsfolge

Unterrichtsfolge: G1 Löschten Fixe Fachfolge

Unterricht: 39 Dazu Wegnehmen

Anzeige von: ☒ UnterrichtsNr. ☐ Fach ☐ U-Nr + Fach

Name	Block	(V)	U-Nr	U-Nr	U-Nr	U-Nr	U-Nr	U-Nr
G1	2	<input type="checkbox"/>	96	97				

U-Nr	Wst	Lehrer	Klasse	Fach
96	1	Gauss	1a	Ph Th
97	1	New	1a	Ph La

1a - Klasse 1a (Gauss)

17.09.2013 - 28.6.2014

	Mo	Di	Mi	Do	Fr	Sa
1	Mat	E	E	Gw.	Bio	Mus
2	Rel	Mat	Sport	Mat	Rel	D
3	Bio	Ke	Mus	D	E	Mat
4	Sport		D	E	Sport	Gw.
5						
6				Ph Th		
7				Ph La		
8		Wk.				

**Note: Entering with double-click**

Lesson numbers for lesson sequences can also be entered by double-clicking on the lesson number in question (in the 1st column of the lessons view).

**Variable fixed (subject) sequence**

In the case of a variable fixed subject sequence, the lessons still follow on from each other but their sequence is variable. In the above example, Untis would be able to choose whether to schedule the theory or practical (lab) lesson first.

Name	Block	(V)	U-Nr	U-Nr
G1	2	<input checked="" type="checkbox"/>	96	97



## 7.2 Sequence in a week

The week sequence allows you to specify the order of class lessons during the week. This function is designed for use with lessons with one or two periods per week.

Access '[Lessons|Lesson sequences](#)', set the drop-down list at the top right to *Sequence in a week* and enter the lessons that are to be scheduled in sequence.

### Example

The chemistry theory lesson for class 1b is to be scheduled, with the chemistry lab lesson following sometime later in the week.

If a sequence is now entered for the week as shown in the example, Untis will schedule lesson 98 before lesson 99.

The screenshot displays the Untis software interface for scheduling lessons. The main window is titled 'Klasse 1b (Newton) / Klasse' and shows a list of lessons with columns for U-Nr, Kl, Le, Nvpl, Wst, Jst, Lehrer, Fach, Text, and Klasse(n). Lessons 98 and 99 are listed, both for class 1b, taught by Gauss, with subjects Ch Th and Ch La respectively.

The 'Unterrichtsfolge' (Lesson Sequence) window is open, showing the 'Wochenfolge' (Weekly Sequence) tab. It includes fields for 'Unterrichtsfolge' (G2), 'Löschen' (Delete), and 'Wochenfolge' (Weekly Sequence). Below these are fields for 'Unterricht' (54), 'Dazu' (Add), and 'Wegnehmen' (Remove). The 'Anzeige von' (Display of) section has radio buttons for 'UnterrichtsNr.' (Lesson Number), 'Fach' (Subject), and 'U-Nr + Fach' (Lesson Number + Subject).

The '1b - Klasse 1b (Newton) Stundentafel' (Weekly Timetable) window is also visible, showing a weekly schedule from 17.09.2013 to 28.6.2014. The timetable is a grid with days of the week (Mo, Di, Mi, Do, Fr, Sa) and periods (1-8). A callout box points to the timetable, stating: 'Zuerst Ch Th und später in der Woche Ch La.' (First Ch Th and later in the week Ch La.).

A maximum of 3 lesson numbers are possible in the week sequence.

## 7.3 Simultaneous lessons

In certain circumstances, for example in combination with the course scheduling module or lessons that take place fortnightly, it may be desirable but not essential to schedule different lessons at the same

time. You can define this condition here.

Access ' [Lessons|Lesson sequences](#) ', set the drop-down list at the top right to *Simultaneous lessons* and enter the lessons that are to be scheduled in sequence.

The difference between simultaneous lessons and [coupled lessons](#) is that the optimisation tool is permitted to split simultaneous lessons. Coupled lessons, on the other hand, can never be split.

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