



Untis

Calendar - Year Planning



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1 Introduction

1.1 Calendar - yearly scheduling

Untis Calendar - yearly planning is a timetable scheduling system specially designed to meet the following requirements:

- Scheduling yearly periods at unconnected times
- Blocking teachers at certain times.

2 General

2.1 Lessons

2.1.1 Yearly periods

The great advantage of working with the calendar module is that it allows you to deal with genuine *yearly periods* . In contrast to weekly periods, these yearly periods can be scheduled on completely unconnected dates.

The screenshot shows two windows from a school timetable software. The top window, titled '5a - Class 5a (Nobel) Timetable (Cla11)', displays a weekly timetable grid. A red callout box points to a yellow bar across the top of the grid, stating: 'Weekly periods are always held at the same time every week'. Another red callout box points to a 'Mus' lesson block, stating: 'Years periods can be scheduled completely independently.' The bottom window, titled 'Class 5a (Nobel) / Class', shows a table of lessons with columns for L-No., Cl,Te., UnSched, F Per, Yrs, Teacher, Subject, Les. groups, LG-Distrib, Line-less.gr, Class(es), Subject room, Home room, Double per, and From. Two lessons are listed: L-No. 96 (Teacher: New, Subject: D) and L-No. 97 (Teacher: Hugo, Subject: Mus).

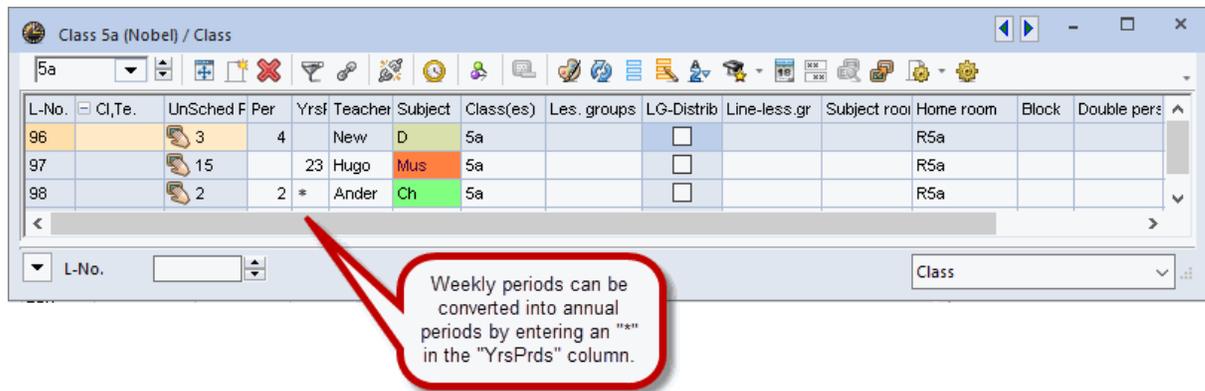
L-No.	Cl,Te.	UnSched	F Per	Yrs	Teacher	Subject	Les. groups	LG-Distrib	Line-less.gr	Class(es)	Subject room	Home room	Double per	From
96		3	4	New	D			<input type="checkbox"/>		5a		R5a		
97		15	23	Hugo	Mus			<input type="checkbox"/>		5a		R5a		

2.1.2 Yearly periods or weekly periods

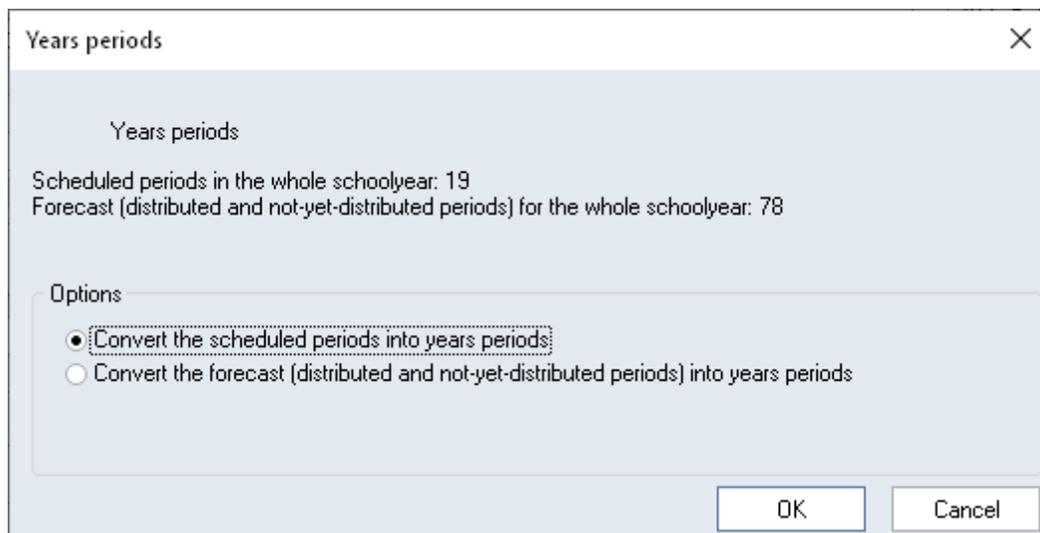
Use weekly periods if the lessons in question are to be scheduled at the same time each week in the timetable and yearly periods if lessons are to be scheduled on an irregular basis.

Note:

You can convert weekly periods to yearly periods later on by entering a '*' in the 'YrsPrds' column.



The following prompt is displayed if some of the weekly periods have already been scheduled:



Option 1: convert scheduled periods into weekly periods

If one period of a 2-period lesson has already been scheduled, this one weekly period will be converted into a number of yearly periods. In the example, this concerns 20 yearly periods, since the school year has 21 weeks including one week of holiday.

5a - Class 5a (Nobel) Timetable (Cla11)

16.09.2019 - 22.9.2019

	School week																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Mo-1	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch		Ch	Ch	Ch
Tu-2																					
We-3																					
Th-4																					
Fr-5																					
Sa-6																					
Su-7																					

22.12.2019-31.12.2019

L-No. Tea. Subj. Rm. Cla. Time School week Stud. Special text Cluster Line text-2 Student group

+3

Cla11 - Class 11

Class 5a (Nobel) / Class

L-No.	Cl,Te.	UnSched	F	Per	Yrs	Teacher	Subject	Class(es)	Les. groups	LG-Distrib	Line-less.gr	Subject room	Home room	Block	Double pers
96		4		4	New	D	5a					R5a			
97		23			23	Hugo	Mus	5a				R5a			
98					20	Ander	Ch	5a				R5a			

L-No. Class

Option 2: extrapolation - scheduled and unscheduled periods are converted to yearly periods.

This option results in 40 yearly periods; 20 have already been scheduled while a further 20 remain to be scheduled.

Class 5a (Nobel) / Class

L-No.	Cl,Te.	UnSched	F	Per	Yrs	Teacher	Subject	Class(es)	Subject room	Home room	From	To	Double pers
96					0	New	D	5a		R5a			
97					23	Hugo	Mus	5a		R5a			
101		20			40	Ander	Ch	5a		R5a			

L-No. 96 Class

In both cases the yearly periods can now be rearranged as independent calendar entries.

	School week																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Mo-1	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	22.12.2019-31.12.2019	Ch	Ch	Ch
Tu-2																					
We-3																					
Th-4																					
Fr-5								Ch													
Sa-6																					
Su-7																					
-8																					

	School week																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Mo-1	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	Ch	22.12.2019-31.12.2019	Ch	Ch	Ch
Tu-2																					
We-3																					
Th-4																					
Fr-5								Ch													
Sa-6																					
Su-7																					
-8																					

2.2 Calendar - yearly scheduling

2.2.1 Introduction

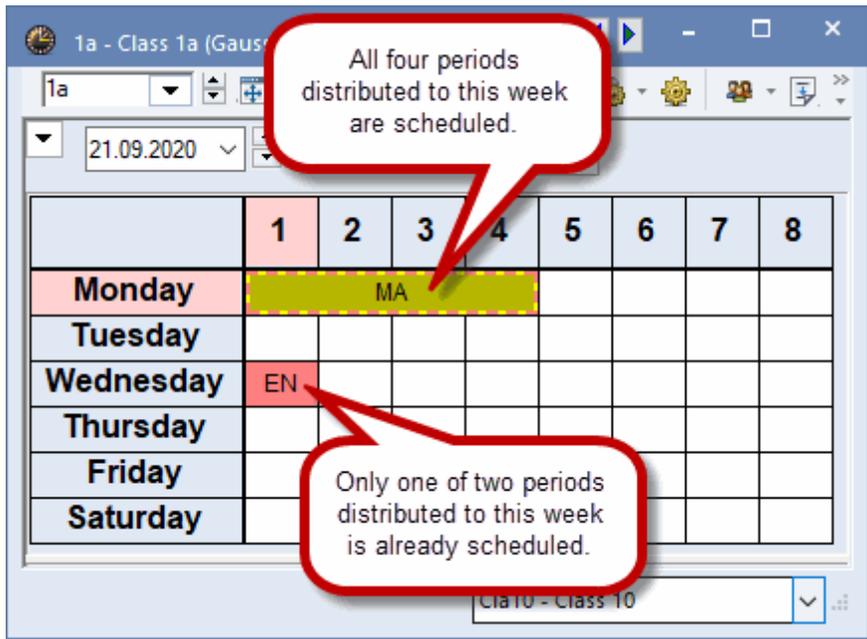
The heart of 'Calendar - Year Planning' is the window of the same name, which you can open via 'Modules | Calendar - yearly scheduling'. If you have already worked with Year's Planning in Terms the similarities in the windows will be obvious. The great advantage of calendar - yearly scheduling is that you do not need to create and work with terms.

The window is divided into two sections. Let's look at the display in the left section of the window, where you will see a list of all the lessons in the school.

You can hide or show details for each lesson such as lesson number, subject, class, number of students etc.

The white columns display the individual school weeks. A column shaded dark-orange indicates that all the days of the week in question lie within a holiday, while lighter shading indicates that some days of the week lie within a holiday.

Yearly periods can be allocated simply by entering them in the individual lesson weeks. By moving the mouse over a cell you get further information on the current lesson. In addition to how many periods are scheduled or not, you also get information on coloured cells, why they are coloured.



2.2.3 Overview window

The right section of the calendar window provides an overview of the scheduled load for classes, teachers and students and the capacity utilisation of rooms in the individual school weeks.

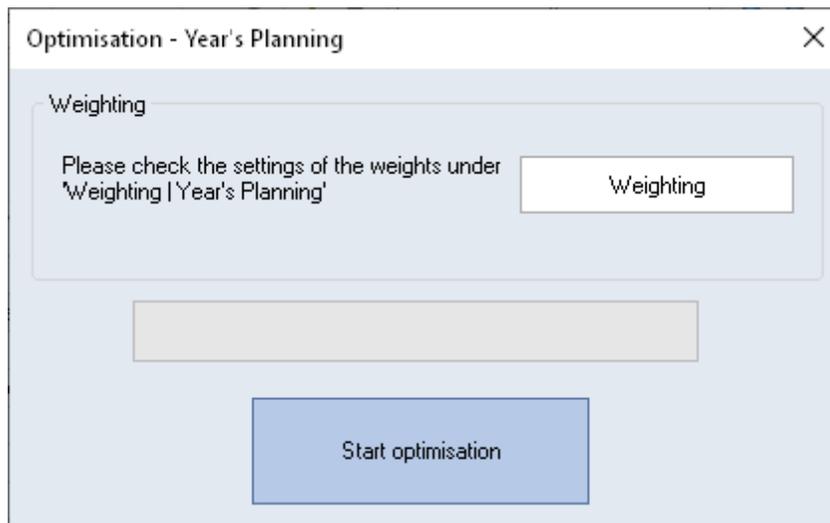
The 'Ideal' column displays the (calculated) average value. Red shading in individual weekly columns indicates that elements are overutilised while green shading indicates spare capacity.

Class(es)					Periods/week																					
Name	Ttl.	Distr	Open	Scher	Ideal	1	2	3	4	5	6	7	8	9	10	11*	12*	13*	14*	15*	16	17	18	19	20	21
1a	404	315	89	4	28	24	21	21	16	22	23	23	21	22	22	2					20		14	20	21	23
1b	561	384	177		29	26	26	26	32	31	26	25	25	25		2					25		14	25	25	26
2a	640	634	6		32	45	45	44	44	44	44	44	44	44							44		16	44	44	44
2b	600	520	80		32	37	37	37	24	36	37	37	36	36	37						37		18	37	37	37
3a	640	576	64		32	39	40	40	37	40	40	39	39	39	39	2	2	2	2	2	40		16	39	39	40
3b	600	536	64		30	36	37	37	34	37	37	37	37	37	36	2	2	2	2	2	36		16	36	36	37
4	620	472	148		27	32	33	33	29	33	33	32	32	32	32						32		22	32	32	33
5a	63	63			7	5	4	5	3	8	4	4	4	4	3						2		7	3	3	4
Test	40	40			1					4	4	9	9	9	5											

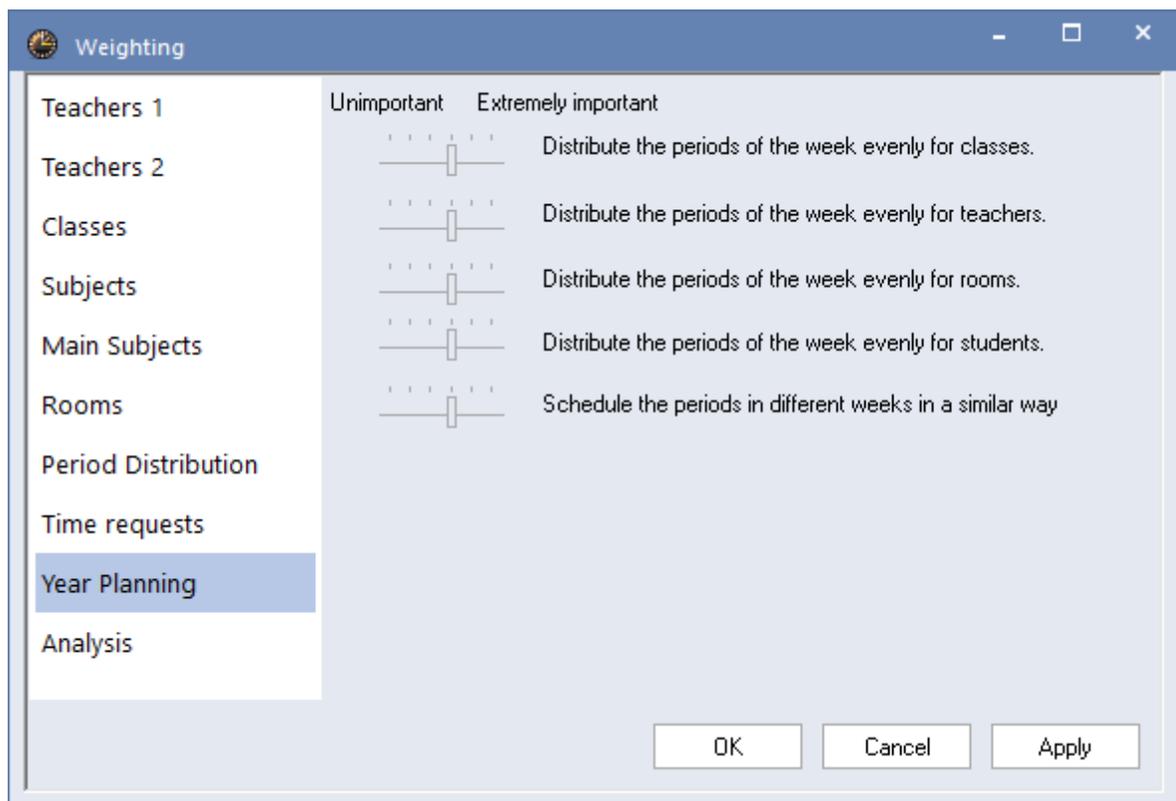
2.2.4 Automatic allocation

2.2.4.1 Principle

If you wish to allocate lessons to the individual school weeks automatically, open the optimisation window by clicking on the <Optimise> toolbar icon



It is important that you first enter weighting settings. To do this, click on the <Weighting> icon.



When allocating yearly periods to individual weeks automatically, the basic assumption is that all periods should be spread as evenly as possible over the school year. No assumptions are made concerning the capacity load of teachers, classes, rooms or students.

It is therefore essential that you enter weighting for allocating periods for the individual elements according to your requirements.

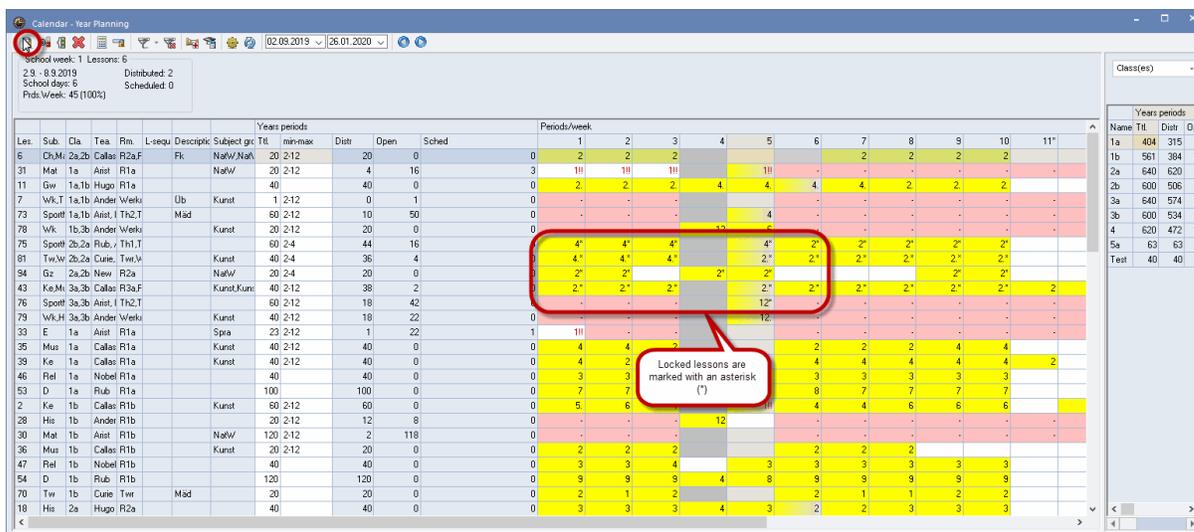
The possibilities for blocking certain weeks or lessons or for specifying minimum/maximum numbers of periods per week are essentially the same as those for year's planning in terms. For this reason, please refer to the chapter of that name for more details

Note:
You can also open weighting to optimise calendar - yearly planning via 'Scheduling | Weighting'

2.2.4.2 Functions

2.2.4.2.1 Lock allocation

Use the <Lock allocation> function to permanently retain the period allocation you entered manually.



2.2.4.2.2 Blocking

Use blockings to prevent periods of specific lessons/week being allocated to certain weeks.

2.2.4.2.3 Lesson blocks

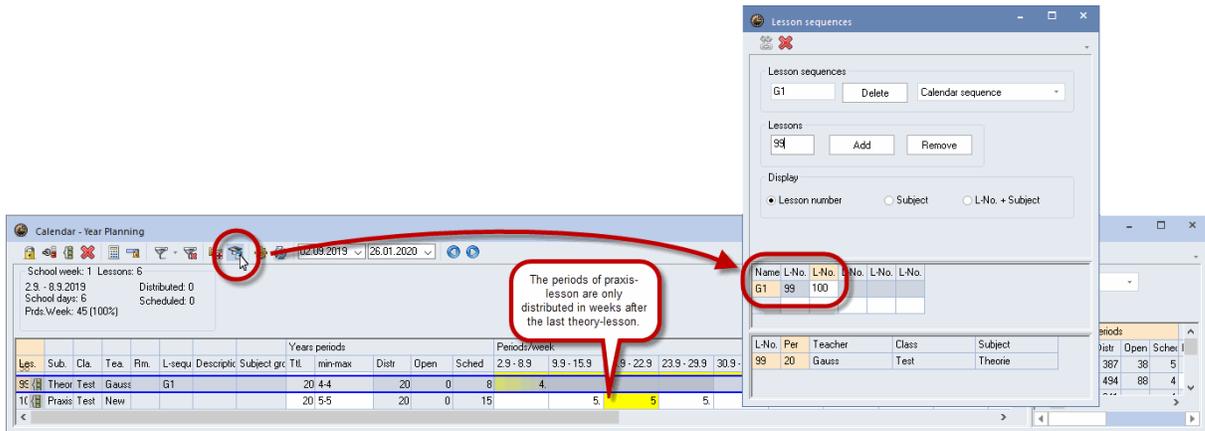
Lesson blocks should be scheduled in consecutive weeks (without any breaks).

2.2.4.2.4 Locking weeks

The <Lock weeks> button allows the timetables of individual weeks to be 'frozen' in such a way that they can no longer be changed during timetable optimisation.

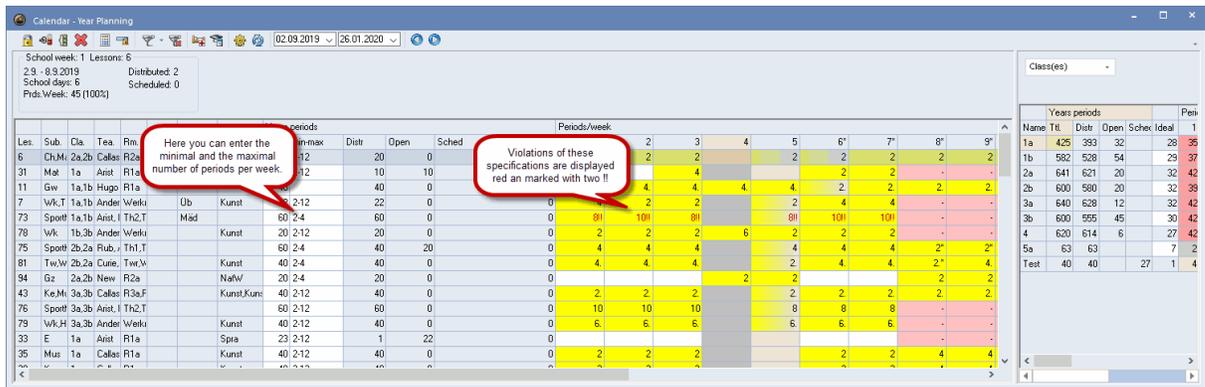
2.2.4.2.5 Calendar sequences

Calendar sequences allow the option of specifying that certain lessons should be scheduled sequentially. Sometimes, for example, a theoretical lesson must have been given before the periods of practical instruction can be scheduled.



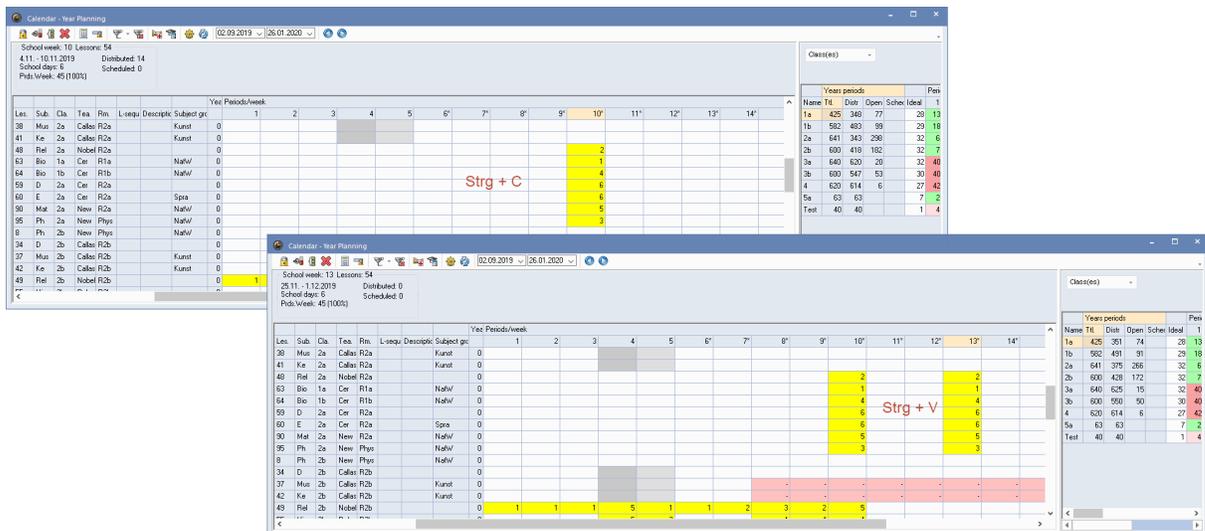
2.2.4.2.6 Minimum/maximum lessons

Use the 'min-max' field to define the minimum and maximum number of periods of a lesson that may be held in any one week.



2.2.4.2.7 Copy allocation of a week

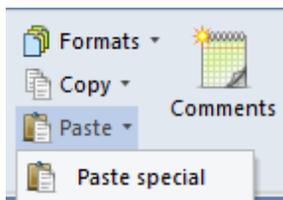
In the calendar window you can also select an entire column by clicking on its heading. Copy and paste and the allocation of a week is transferred to another week.



When you have selected a column you can also block the whole week by clicking on the -3 time request button.

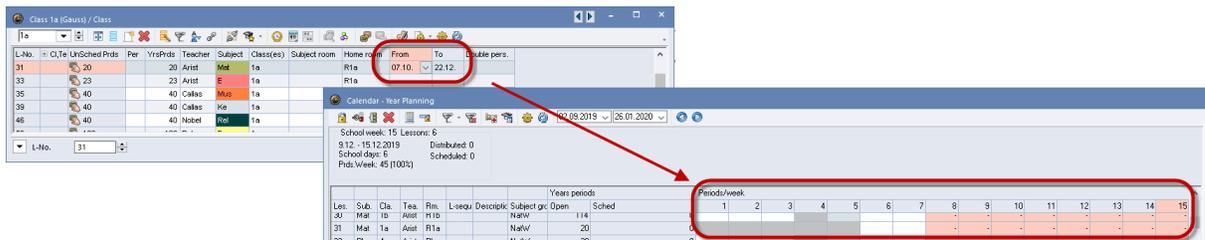
Tip:

If you want to copy the allocation plus the timetable, go to the 'Data' tab and select 'Paste | Paste special'.



2.2.4.2.8 Restrictions and lesson groups

When you work with restrictions coming from lesson groups or entries into the fields 'from-to', they are going to be highlighted with a colour.



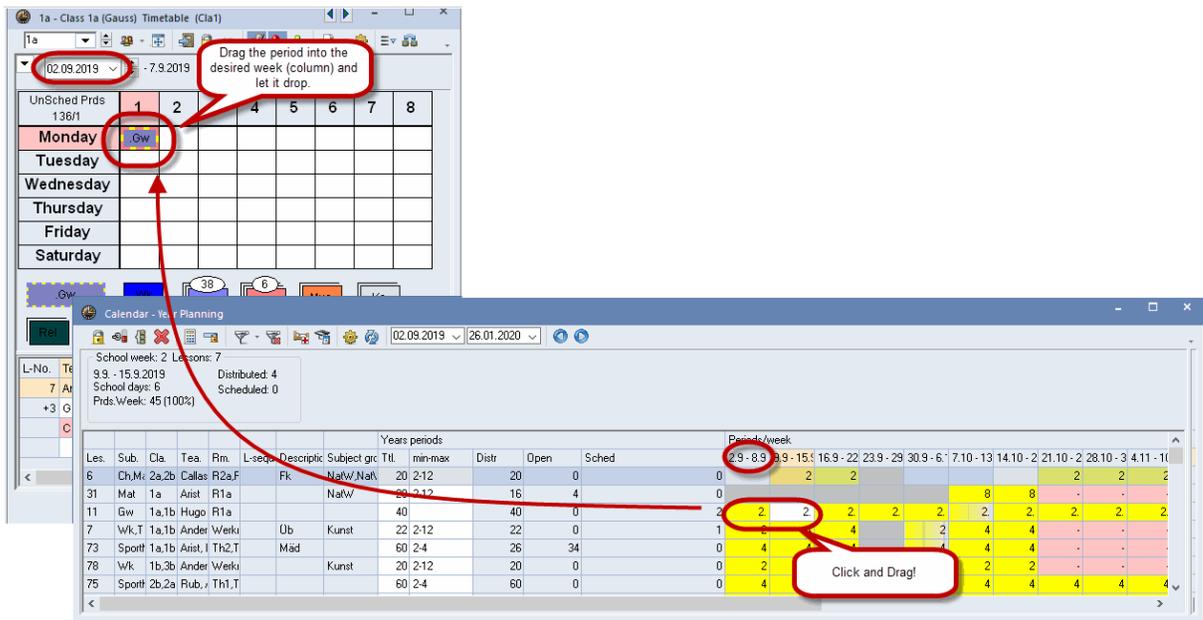
2.2.5 Scheduling periods

2.2.5.1 Manual scheduling

Untis calendar scheduling provides a number of additional ways of scheduling periods in the timetable.

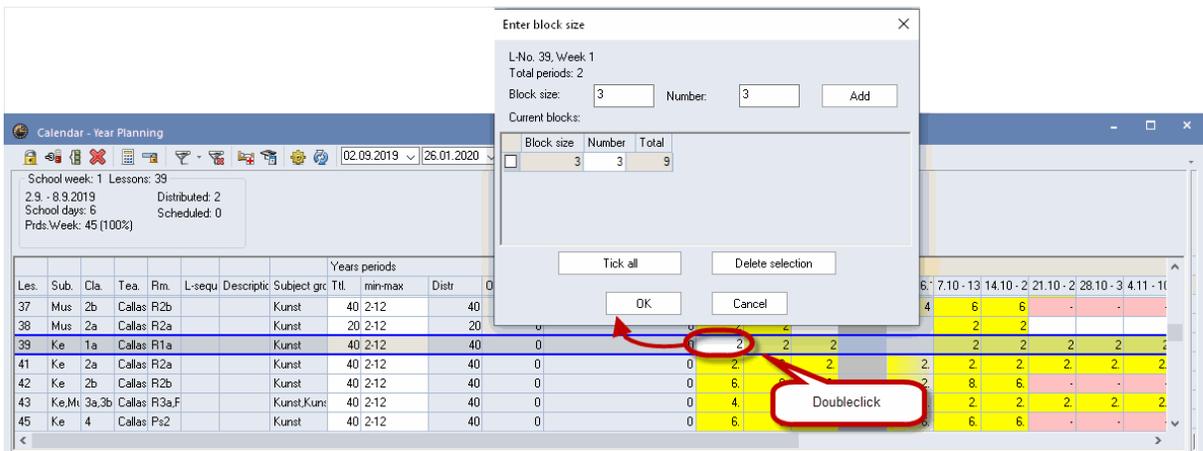
2.2.5.1.1 Calendar window --> timetable

You can use drag&drop to place periods from the calendar window directly in the timetable. Please note that the initial click in the calendar window synchronises the corresponding date in the timetable window.



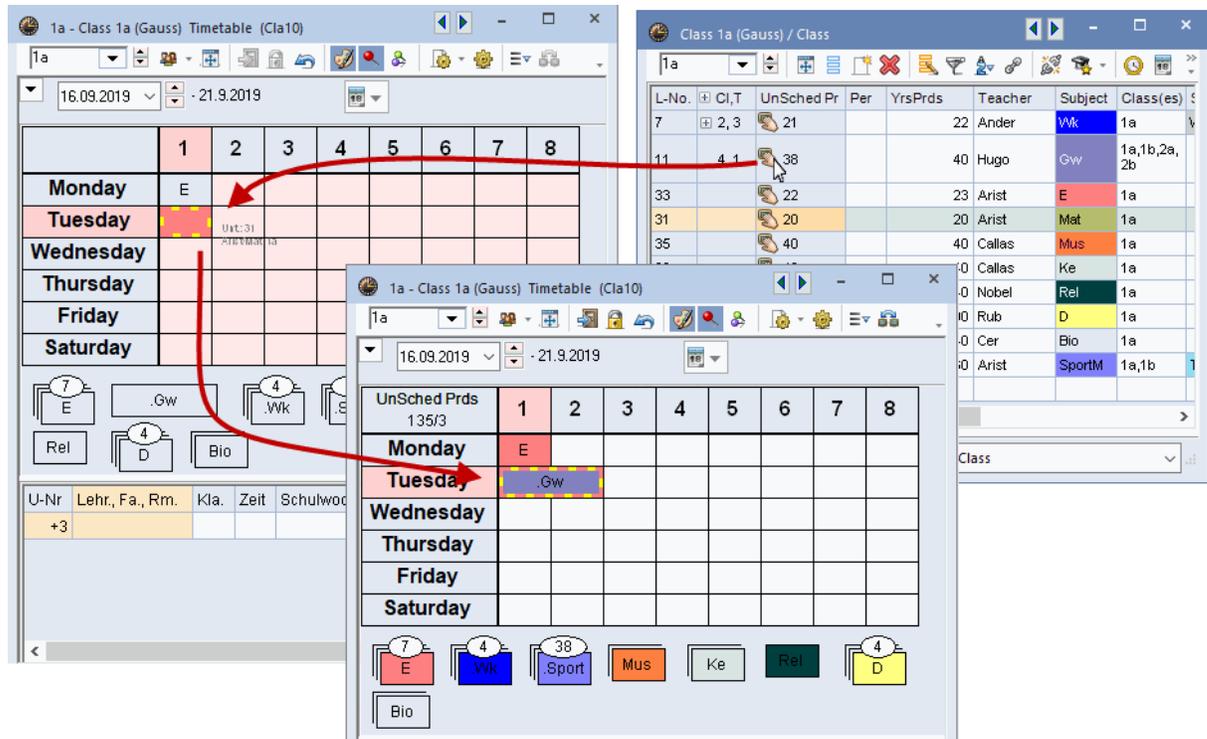
2.2.5.1.2 Block sizes

The calendar - year planning window enables you to specify, by double-clicking in individual cells, the size of the blocks of periods in which the periods assigned to the relevant weeks are to be scheduled in the timetable.



2.2.5.1.3 Enter yearly periods in weekly timetable

You can also drag yearly periods directly into a (weekly) timetable from the lessons window

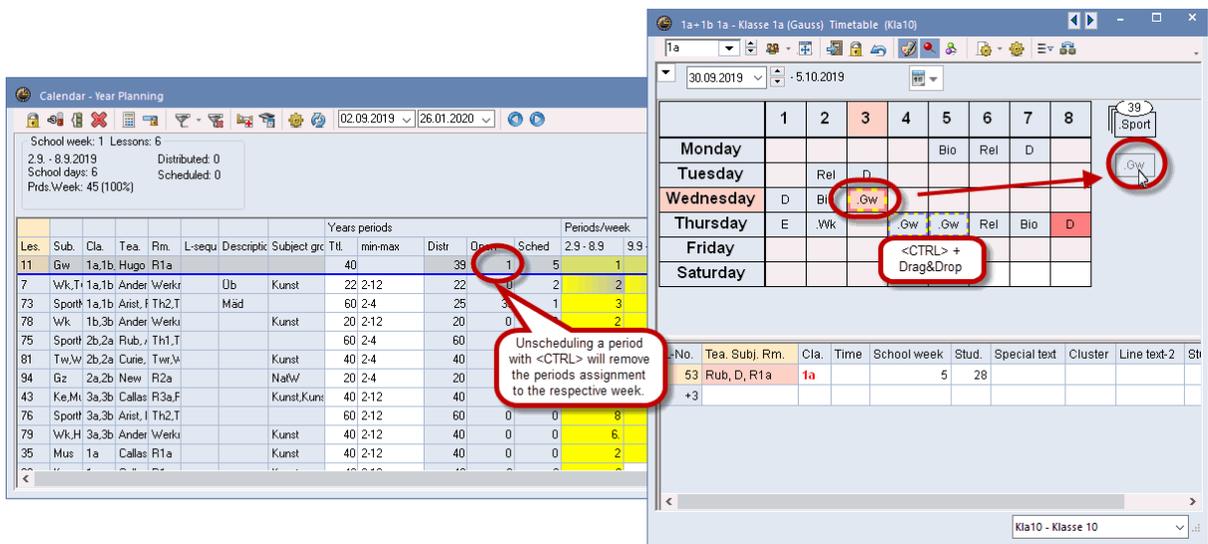


Use the time range setting in the timetable window to set the week in which you wish to schedule the period in question.

Note:
Unschedule via <CTRL>+Drag&Drop

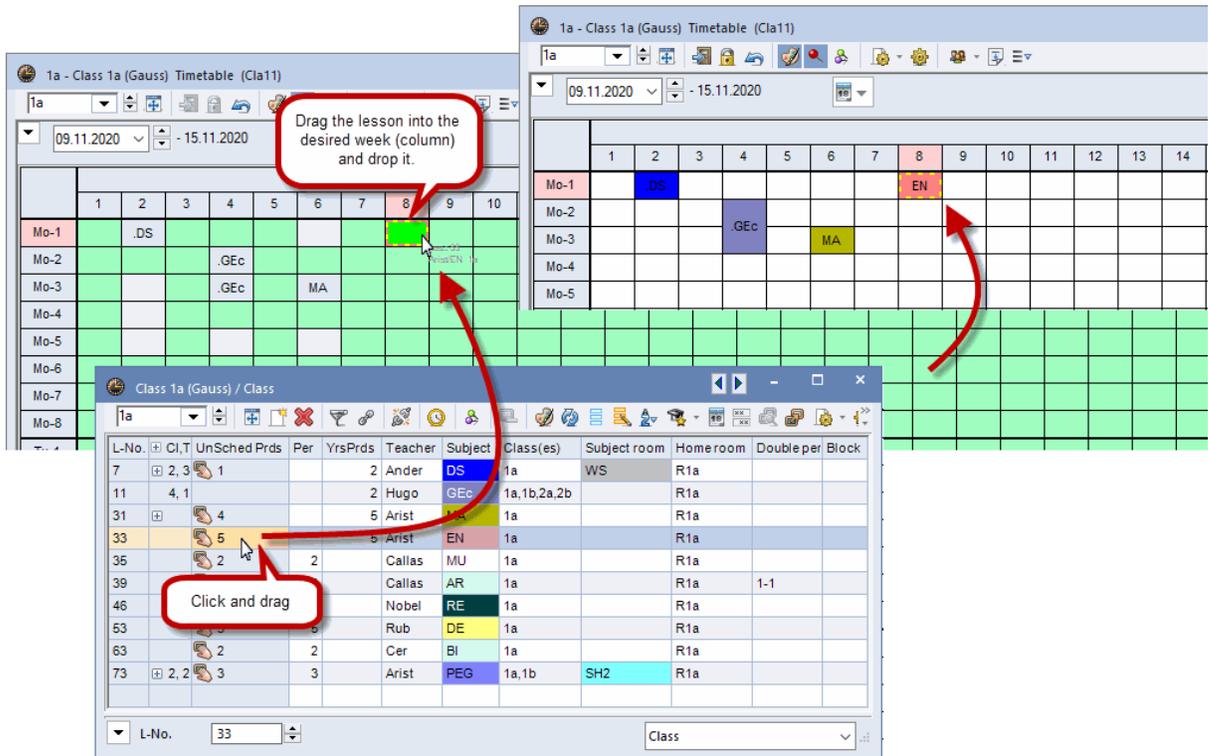
If you unschedule a yearly period in the timetable, this period is allocated to the current week in the 'Calendar - Year Planning' window by default. By changing to another week in the timetable, the unscheduled period vanishes from the area of non-scheduled periods next to the timetable.

When unscheduling a period by <CTRL> + drag&drop, the allocation to this respective week is also cancelled. Thus it is very easy to shift one period from one week to another directly in the timetable.



2.2.5.1.4 Yearly periods in weekly overview

Entering yearly periods in the weekly overview You can also schedule yearly periods by dragging a lesson from a lessons window into a weekly summary timetable (format 11).



2.2.5.1.5 Yearly periods in scheduling dialogue

When working with yearly periods there are a few additional functions in the scheduling dialogue. In the selection list 'School week' you set the week you want to work on and you also see the number of

scheduled periods of this week (regarding the source lesson).

Les.	Uns	Time	Cla.	Tea.	Sub.
7	1 (21)		2a	Callas	Ch
			1a	Arist	E
			1a	Arist	Mat
			1a	Hugo	Gw
			1a	Ander	Wk
73	39 (60)		1a	Arist	SportM
78	2 (20)		1b	Ander	Wk
75	4 (60)		2b	Rub	SportK
81	2 (40)		2b	Curie	Tw
94	2 (20)		2a	New	Gz
43	4 (40)		3a	Callas	Ke
76	8 (60)		3a	Arist	SportM
79	6 (40)		3a	Ander	Wk
35	2 (40)		1a	Callas	Mus
39	2 (40)		1a	Callas	Ke
46	2 (40)		1a	Nobel	Rel

The scheduling dialogue of the yearly periods also shows in the column 'Uns' (for 'unscheduled') how many periods in total and in this week still need to be scheduled.

Settings

Font Arial 9.0

Grid: Width/Height
120 Column width in % (20 - 200 %)
100 Line height in % (20 - 200 %)

Selection range
1 First period
8 Last period

Window in the background
 Show students
 Calendar: show only unscheduled prds. of the week
 DragDrop: Multiple lessons
 Do not show the totals if there is only one additional row

What do you want shown in each cell?

Subject Class-period
Class Teacher-period
Class Room-period
Subject Student-period

Additional information in the name field

Classes with student total
 Rooms with capacity
 Lessons with student total
 Teachers with student total

OK Cancel

2.2.5.1.6 Change of rooms

In the 'Allocate/Delete Room' window there are also some special functions when working with yearly periods. You can change the room for the periods of the selected week or for all future periods.

1a - Class 1a (Gauss) Timetable (Cla1)

16.11.2020 - 20.11.2020

	Monday	Tuesday	Wednesday	Thursday	Friday
1	.PEG Arist SH2 Rub SH1	RE			
2	MU Callas R1a	.PE			
3	BI Cer R1a	DE			
4	AR Callas R1a	M			
5					
6					
7					
8					

Allocate/Delete this room

Lessons: 35: Periods:2 Mo-2, We-1 ...

Required capac.: 28
R1a (36), Class Room 1a
Home room: R1a

Current selection of lessons

Les.	Teacher	Room	Class(es)
35	Callas	R1a	1a

Apply to:

s

o

The rooms are changed in all lessons from 16.11.

Allocate additional room

The periods of the subsequent weeks

Available rooms

Rm.	Alt. Rm	Alt. HRm	Occupied
R1a	✓	■	□
R1b	✓		
R2a	✓		
R2b	✓		
R3a	✓		
SH1			
SH2			

Allocate m. Delete room Close

Cla1 - Class 1

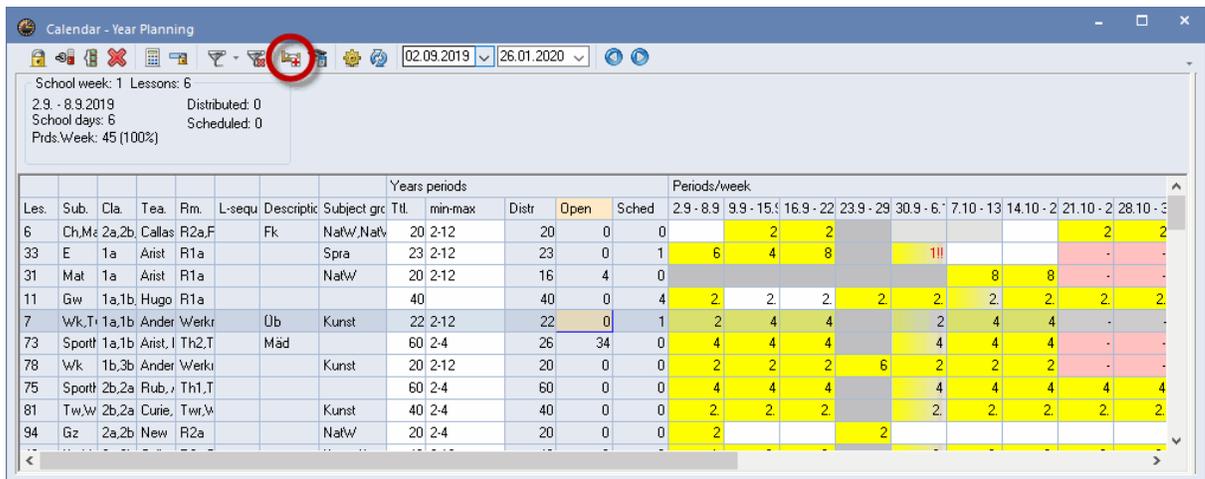
2.2.5.2 Calendar absences

When performing long-term scheduling, the scheduling team must also bear in mind that some teachers will have other commitments on some days of the year. Timetable optimisation should take these days into account by not scheduling any lessons for the teachers in question on these days.

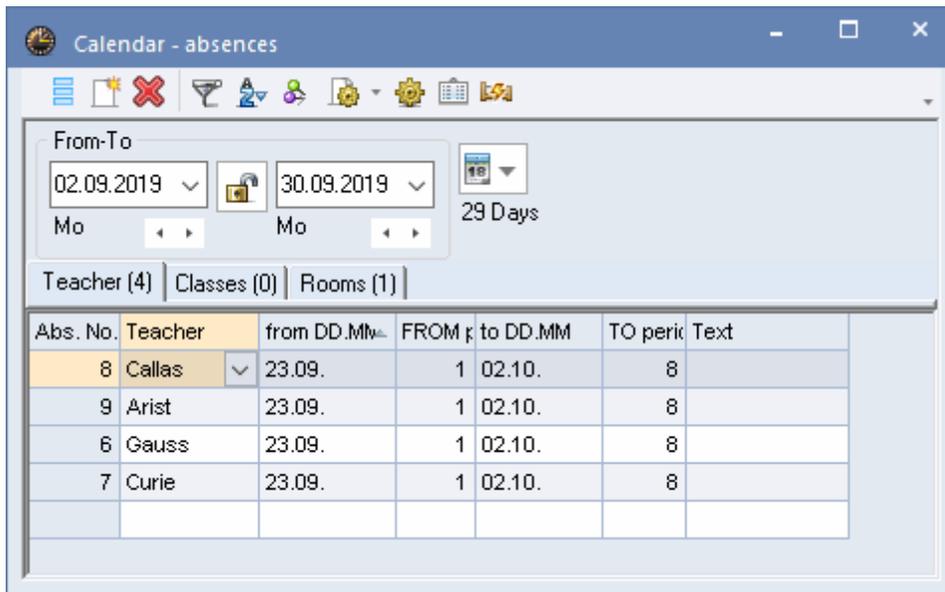
Untis calendar scheduling can take this into consideration by means of *calendar absences*.

2.2.5.2.1 How to enter absences

The calendar absences window is opened using the toolbar icon of the same name  in the 'Calendar - Year Planning' window.



You can enter the 'from' and 'to' dates for the absences of teachers (and also for classes) in this window.



The absences will also be displayed in the timetable window (provided appropriate settings have been made).

Ander - Andersen, Hans Christian Timetable (Tea21)

Ander

24.09.2019 - 7.10.2019

Teachers of the class/subject

	School week: 4															School week: 5															School week:											
	Tuesday			Wednesday			Thursday			Friday			Saturday			Monday			Tuesday			Wednesday			Thursday			Friday			Saturday			Monday								
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3						
Gauss	Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent			Test								
New	Tes			Tes												Test			Tes																							
Hugo																																										
Ander																																										
Arist	Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent					
Calla	Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent					
Nobel																																										
Rub																																										
Cer																																										
Curie	Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent			Absent					

Element filter

Tea21 - Teacher 21

Note:
Calendar absences can also be entered via the school year calendar accessed under 'Master Data | Teachers' (or 'Classes').

Teachers / Teacher

Ander

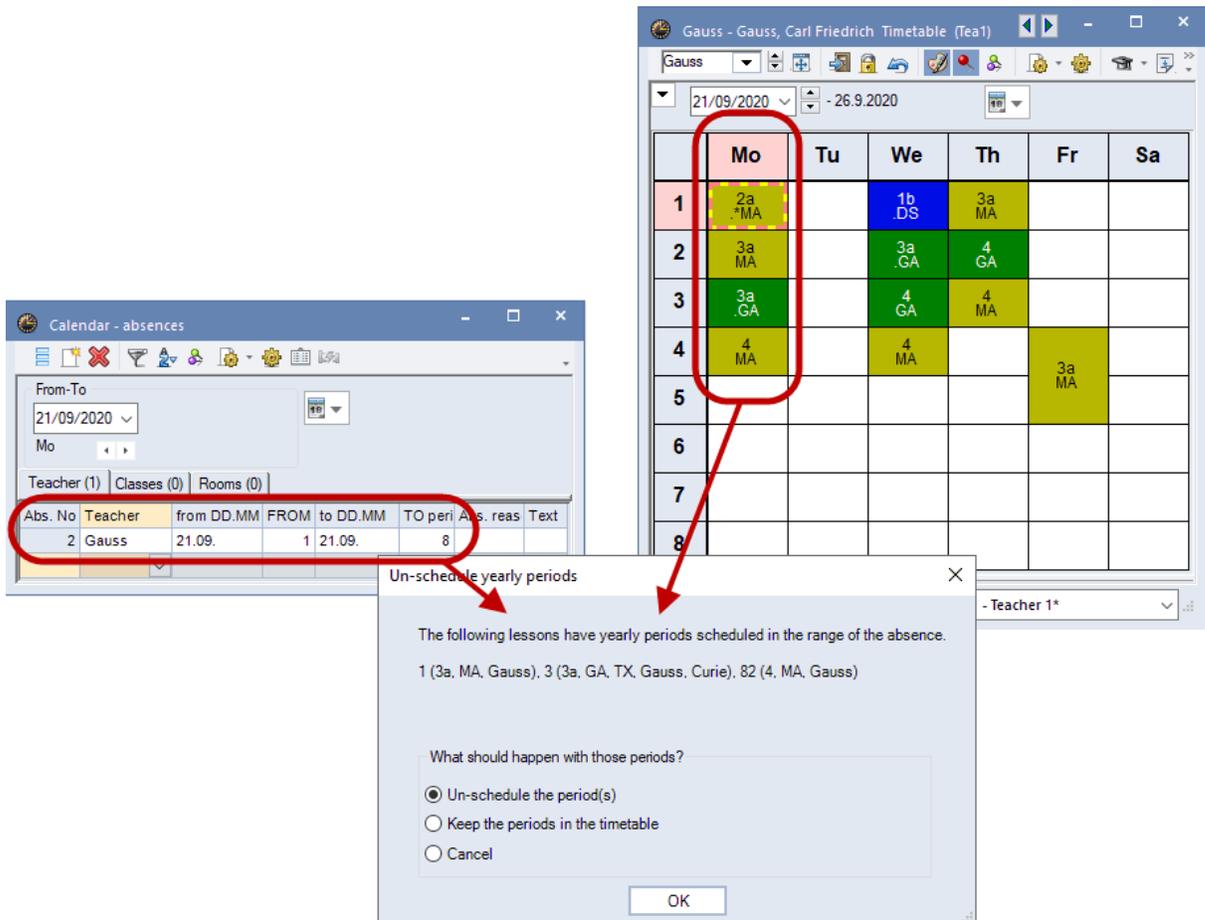
Name	Surname	Room	NTPs target	Periods/ds	Lunch break	Initials	First name
Gauss	Gauss		0-3	2-6	1-2	Dr.	Carl Friedrich
New	Newton		0-1	4-6	1-2	Sir	Isaac
Hugo	Hugo		0-1	4-7	1-2		Victor
Ander	Andersen		0-1	4-6	1-3		Hans Christian
Arist	Aristoteles		0-1	4-6	1-2		
Callas	Callas		0-1	4-6	1-2	Maestra	Maria
Nobel	Nobel		0-1	4-6	1-2		Alfred
Rub	Rubens		0-1	4-7	1-3		Paul
Cer	Cervantes		0-1	4-7	1-2		Miguel
Curie	Curie		0-1	4-7	1-3	Madame	Marie

Teacher



2.2.5.2.2 Warning messages

When you enter an absence of a teacher in the calendar scheduling who at the respective time is already scheduled, a warning message will pop up from now on. Via this message you can either accept the situation as it is or let the obsolete periods be unscheduled.



2.2.5.3 Automatic scheduling (optimisation)

Once you launch optimisation via 'Scheduling | Optimisation' all (non-fixed) lesson periods will be scheduled automatically regardless of whether they are yearly or weekly periods.

Untis uses the following logic with regard to yearly periods:

- Allocated periods that have not been fixed in the calendar window will be reallocated
- Allocation criteria entered in the calendar window will be taken into account even if no periods have been entered in the calendar window (for example 'blocked' lessons)
- Calendar absences for classes and teachers will be fully taken into account

Below is a summary of all the icons that may be displayed in the 'Calendar - Year Planning' window:

The screenshot shows the 'Calendar - Year Planning' window with a timetable grid. The grid has columns for 'Years periods' and 'Periods/week' across various weeks. Callout boxes provide the following explanations:

- Dark orange background:** This weeks are locked. The timetable optimisation won't be activated for this weeks.
- Light gray background:** Light gray weeks indicate that one of the lessons elements has a calendar absence in this week. The background is dark gray, if the absence lasts for the whole week.
- Red background:** This red areas marked with '-3' are restricted for the respective lessons.
- Yellow background:** The distribution of these periods is locked. The timetable optimisation must not change the distribution.
- Light orange background:** Dark orange weeks indicate holidays. Light orange weeks denote to feast days.
- Lesson 39:** Lesson 39 shall be scheduled in consecutive weeks (a "block").
- Timetable optimization:** The timetable optimisation will respect the minimum and maximum number of periods per week.

2.2.5.4 Diagnosis

There are special diagnosis features for working with yearly periods. The diagramme below shows, for instance, that teacher Hugo is absent on 5 October all day. However, he is scheduled for 4 periods this day.

Timetable diagnosis

05.10.2020 - 11.10.2020

Input data | Timetable

+	Diagnosis	Wtg	Num
		All	>= 1
+	Lessons		10
+	Class		23
+	Teacher		41
+	Room		26
+	Subject		36
	Students		
	Lesson sequences		
	Calendar - Year Planning		

Type of diagnosis

The optimisation tries to schedule a certain subject no more than once per day per class. Untis enforces this rule comprehensively, such that it checks the 'names' of the subjects of the individual lessons of a class and tries not to schedule these lessons on the same day. These are the cases in which the same subject has been scheduled more than once per day per class.

Weighting: 4
Number: 4

Show related windows

Cl.	Sub.	Per.	L-No.
1b	D	Mo-1	54
2a	His	Mo-2	18
2b	D	Mo-3	34
3a	D	Mo-4	22

Hugo - Hugo, Victor Timetable

Hugo

05.10.2020 - 10.10.2020

	Mo	Tu	We	Th	Fr	Sa
1	Absent			3b		3a
2	Absent		2a	4		
3	Absent			3b		4
4	Absent		4		4	1a.
5	Absent		*2a.	4		
6	Absent		-2	+3	-1	
7	Absent		-2	+3	-1	
8	Absent		-2	+3	-1	

Tea1 - Teacher 1

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Endnotes 2... (after index)