Untis

Department Timetable

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1 Introduction

In large schools that consist of several departments or that have to be divided up into several abstract part because of their size the timetable is very often not created and maintained by one person but by several people. The aim however is to create an optimal overall timetable, particularly with regard to resources shared between departments such as teachers and rooms.

Moreover, in many schools day-to-day cover planning is performed on a departmental basis, i.e. by several cover schedulers, but in this case with cross-departmental elements having to be taken into account.

These requirements call for certain operations such as optimisation or cover planning to be performed department by department.

The Department Timetable module enables you not just to restrict work within one file to one department but also to export the department data fully automatically to separate .gpn files in order to work on them individually. These files are then later merged into one single overall file.

The department timetable really comes into its own in particular when used with the Untis MultiUser module.

2 Data entry

This chapter deals with the definition of departments as well as assigning them to individual master data elements . These entries are the starting point for working on a departmental basis and for splitting the data upinto individual .gpn files.

2.1 Entering departments

You create departments just like any other master data element with short and full name. Just go to 'Modules | Departments | Master Data' and enter new departments in the last, empty line.
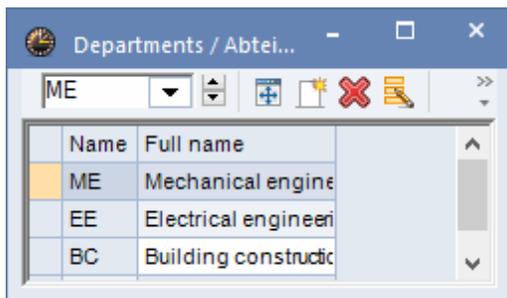

2.2 Assigning to master data

Once you have defined departments you can assign them to your master data elements. Just open the respective window group by going to 'Start | Departments' and the department view of all master data windows is automatically displayed.

Then assign the elements to the respective department via the column 'Department'. Teachers, rooms and subjects can belong to several departments. Just put a comma between the departments when entering them. Elements without any specifications belong to all departments.

Define **one** department for your class.

By assigning the departments to the classes you implicitly define which departments lessons are assigned to. The "Department" column can be displayed in lessons windows to facilitate orientation. This is, however, purely informational as the data cannot be edited there.

According to this example all lessons involving class 2a have now been assigned to departments.

The following rule applies: a lesson has the department of the class assigned to it. If more than one class is involved in a lesson, the first class in the sequence determines the department.

As lessons 6, 75 and 81 in the above example involve a coupling of class 2a with other classes and 2a is the first class entered, the lesson belongs to the department of class 2a.

3   Department processing

Untis allows you to restrict the work within one .gpn file to a specific department.

3.1 'Departments' drop-down list

All the departments that you define are displayed in a drop-down list. Just go to the 'Start' tab and click on 'Departments'.
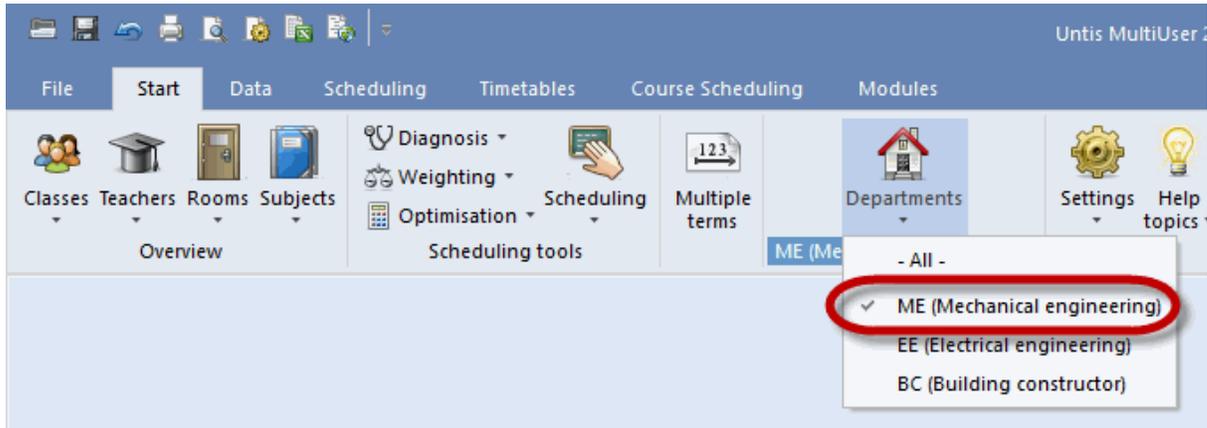
If a department is pre-defined by using the department drop-down list, the respective department is displayed below the symbol 'Departments' in the multi-functional bar.
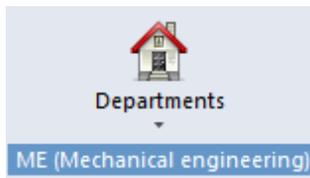
If the program is restricted to a specific department the risk of making changes to another department by mistake is minimised. The following sections illustrate the influence of a predefined department on the various parts of the system.

3.2 Master data and lessons

If you open a master data window after selecting a department only those elements will be displayed which are assigned to the active department or which have not yet been assigned to any department.
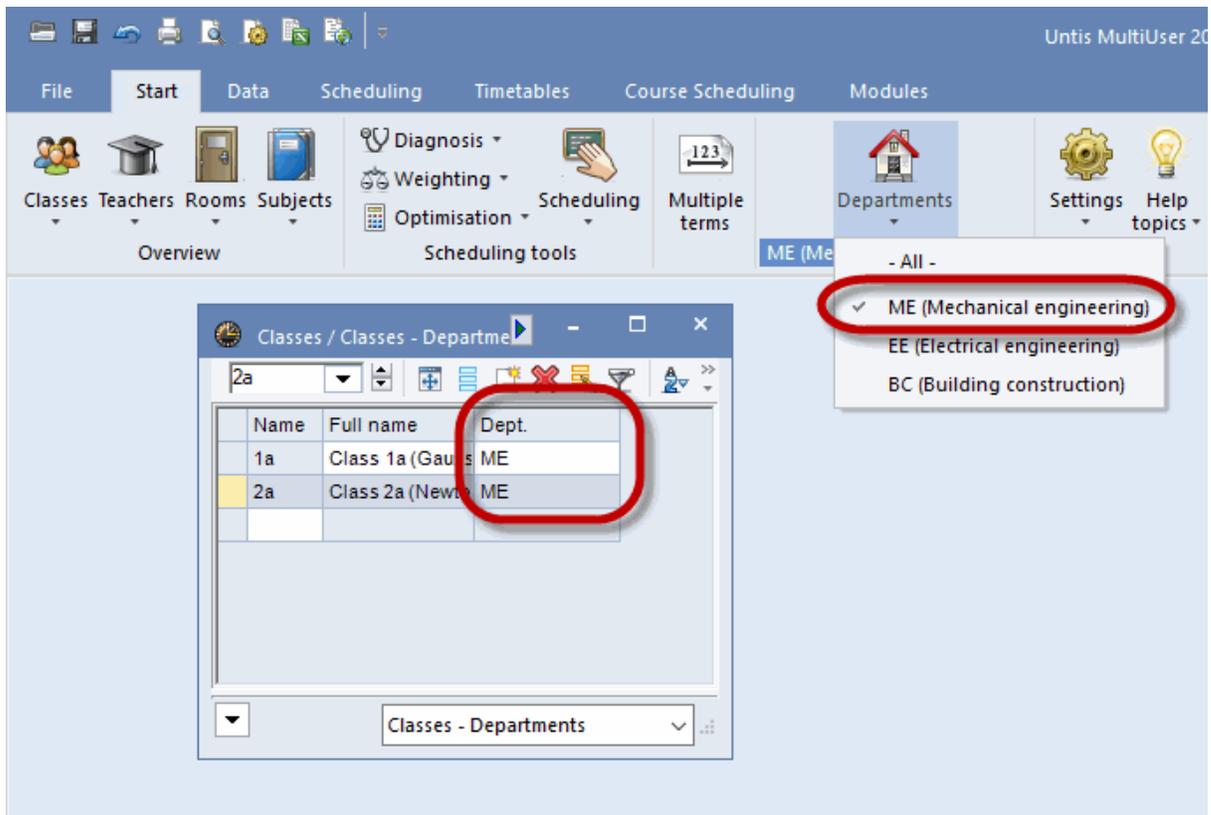
Moreover, when you create a new master data element it will automatically be assigned to the active department.

Similarly, only those elements can be chosen from the drop-down list in lessons windows that have been assigned to either the active department or none at all.

Note:
Please note that in the lessons windows always all lessons are shown of which an element of the selected department is part of.

In the following example in the lessons window of class 2b lessons of the department "ME" are also listed, although the pre-defined department is "EE". The reason for this is that class 2b is part of this lesson, however class 2a is listed first in the coupling. Therefore the lessons automatically belong to the department "ME". Department "EE" can see thoses lessons, but cannot edit them.
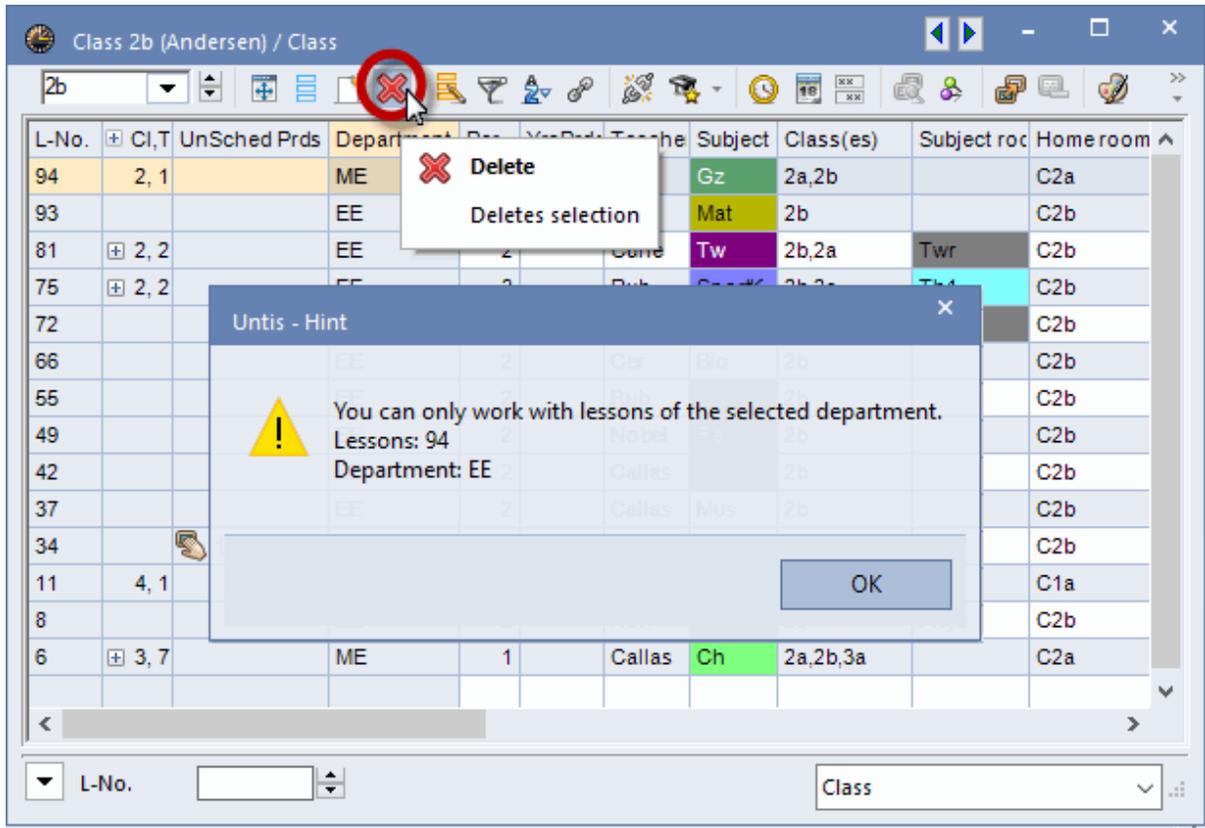
3.3   Manual scheduling

Manual changes to the timetable are only allowed for lessons of the active department.
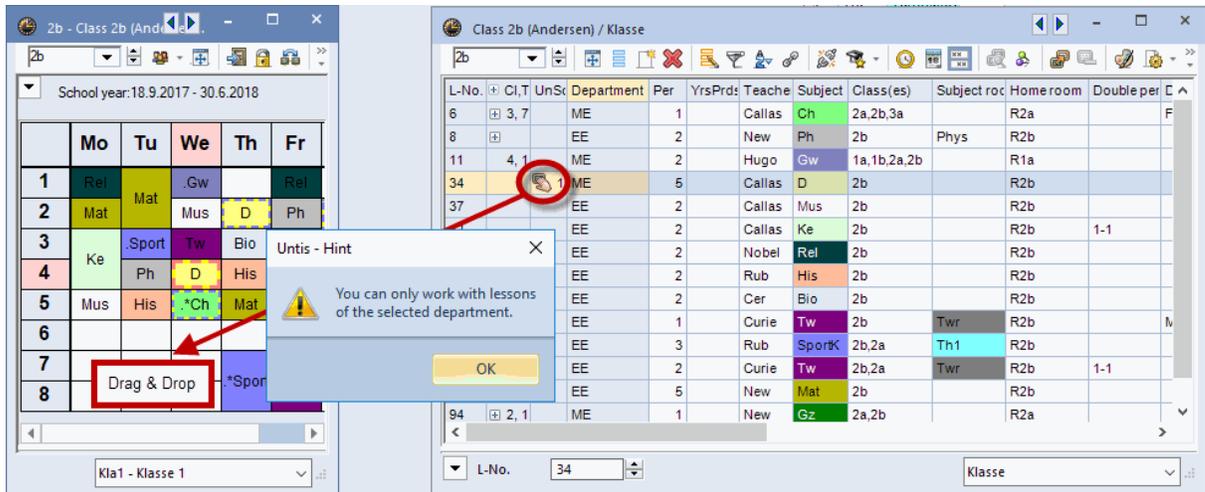
Moreover, in the room allocation dialogue only those rooms are displayed that are assigned either to the selected department or to none at all.

3.4 Optimisation

The algorithm only schedules lessons of the selected department. All other lessons remain unchanged, i.e. periods not scheduled remain unscheduled and periods scheduled for other departments are not changed in any way.

In the following example the 'a' classes (yellow) are assigned to the mechanical engineering department, the 'b' classes (green) to the electrical engineering department and the 'c' classes (red) to the structural engineering department.
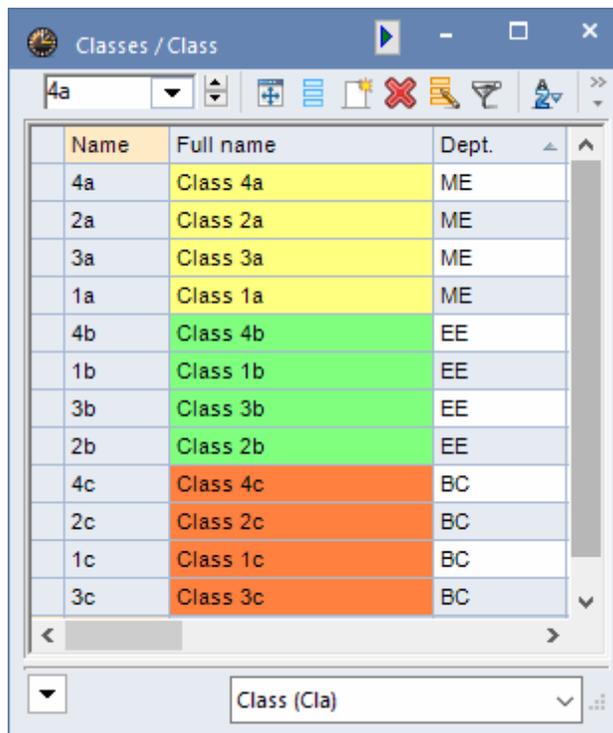
In the first figure on the left, optimisation has been performed for the electrical engineering department. Accordingly, only the lessons of those classes belonging to the electrical engineering department are scheduled. In our example this is class 1b.
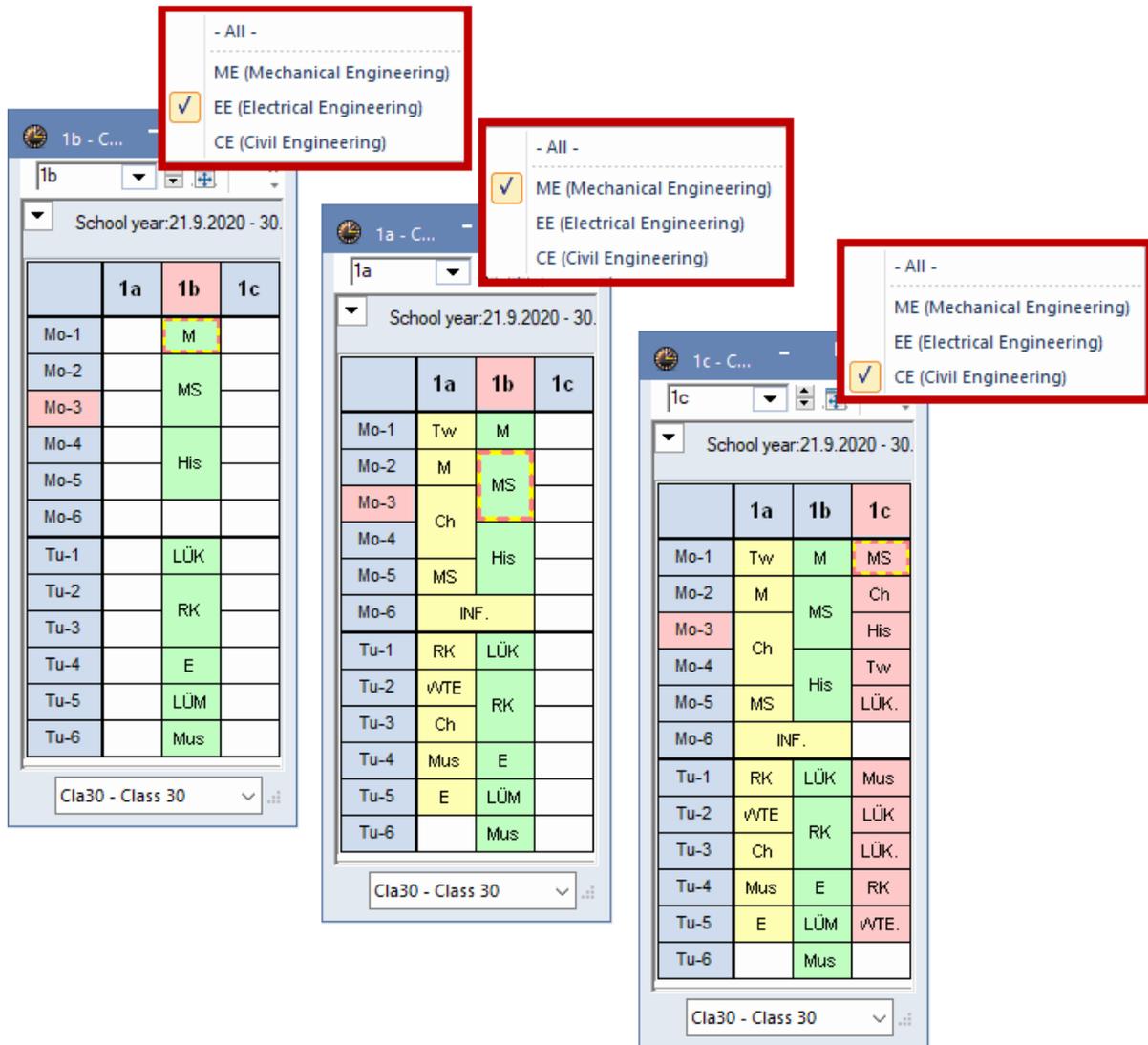
In the centre timetable, further optimisation has been performed with the selection of the mechanical engineering department. The periods of the department first scheduled have not been changed by this. Please note that the coupled IT lesson of classes 1a and 1b has only now been scheduled, since due to the order of the classes in the coupling it belongs to the mechanical engineering department.

In the timetable on the right the remaining periods were scheduled automatically by selecting the SE department. The periods of the other departments already set have again not been changed.

3.4.1   Cross-departmental resources

Please also note that rooms used for lessons of various departments are considered to be cross-departmental resources. The scheduling of cross-departmental resources is performed according to availability, i.e. according to the principle of "first come, first served".
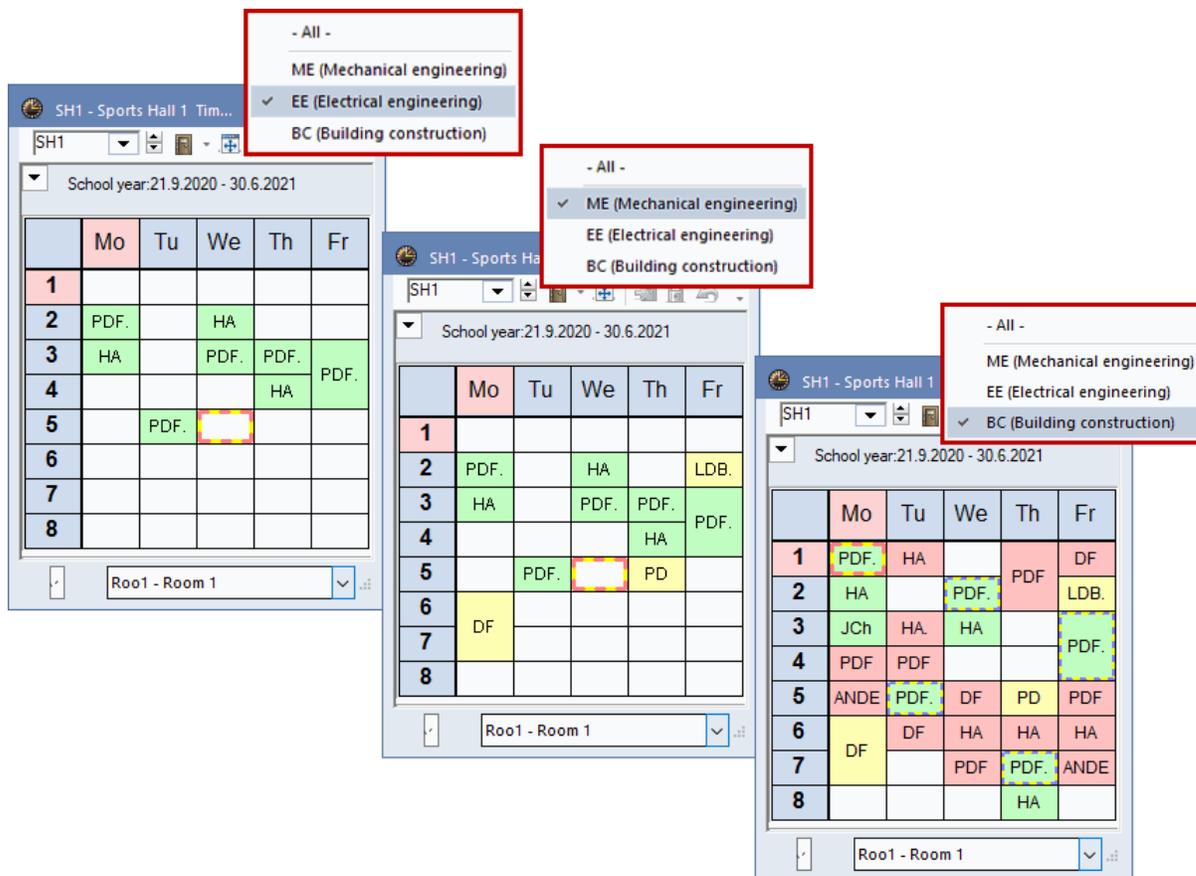
In the example above the gym (SH1) is a cross-departmental resource.

The EE department begins the creation of the sports timetable; all the periods in the timetable are available in the time grid for optimisation. The ME department is then optimised; all periods excluding those occupied by the EE department are available. In the final step the SE department's timetable is created with the remaining vacant periods of room SH1.

3.5   Diagnosis

The diagnosis is also automatically restricted to one department by using the department drop-down list just like master data and lessons . The figure shows the diagnostic item 'Lessons' for two different departments. While there is one lesson unscheduled in the ME department, 2 periods have not been scheduled in the EE department.

3.6   Printing

If the department drop-down list has been set, it has direct influence on the printing functionality of Untis. All print selection menus only show those elements which are assigned either to the currently active department or to none at all.

4 Distributing department data

When department data are distributed a new timetable file is created for each department with the name "<name>.gpn" (where <name> stands for the department's short name). The file contains the following data:

- All the classes of the department
- All the lessons of the department
- All the classes which occur in the lessons of this department
- All teachers, rooms, subjects and departments of the school

Department files are basically completely normal Untis data files. However, they are flagged internally as department files.

> **Note: Department without classes**
> When department data are distributed, only those departments are important which have been assigned to the classes. If you have not assigned any departments to your classes in the "Dept." column, an error message will pop up. Please enter a department for each class and repeat the process.

The work steps necessary for distributing a file will now be illustrated using an example.

1. Please open the demo.gpn file.

2. Using "Modules | Departments | Master Data" you can see that three departments have already been defined in this file. Please openthe windows group 'Departments' by going to "Start | Departments" and assign the departments to the classes in accordance with the figure.

3. Now select " Modules | Departments | Export (distribution)".
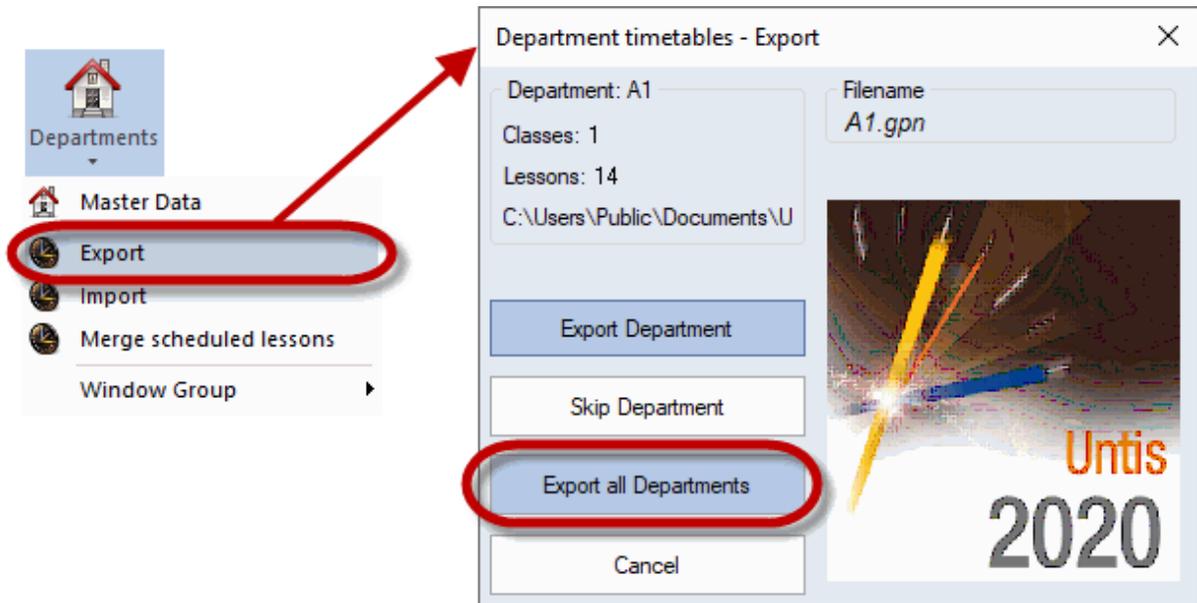
4.   Click on the <Export all departments> button. This will launch the export of the data of all departments in one go. Following the export, a window will be displayed indicating how many departments and how many classes have been exported.

Warning:
The department files are automatically assigned the short name of the respective department. Any existing files with the same name will be overwritten without any prompt being displayed.

Tip: Changing the location of department data
By default department data are saved to the Untis program directory. You can change this with the "Settings | Miscellaneous | Directories" option by defining a different path for department files.
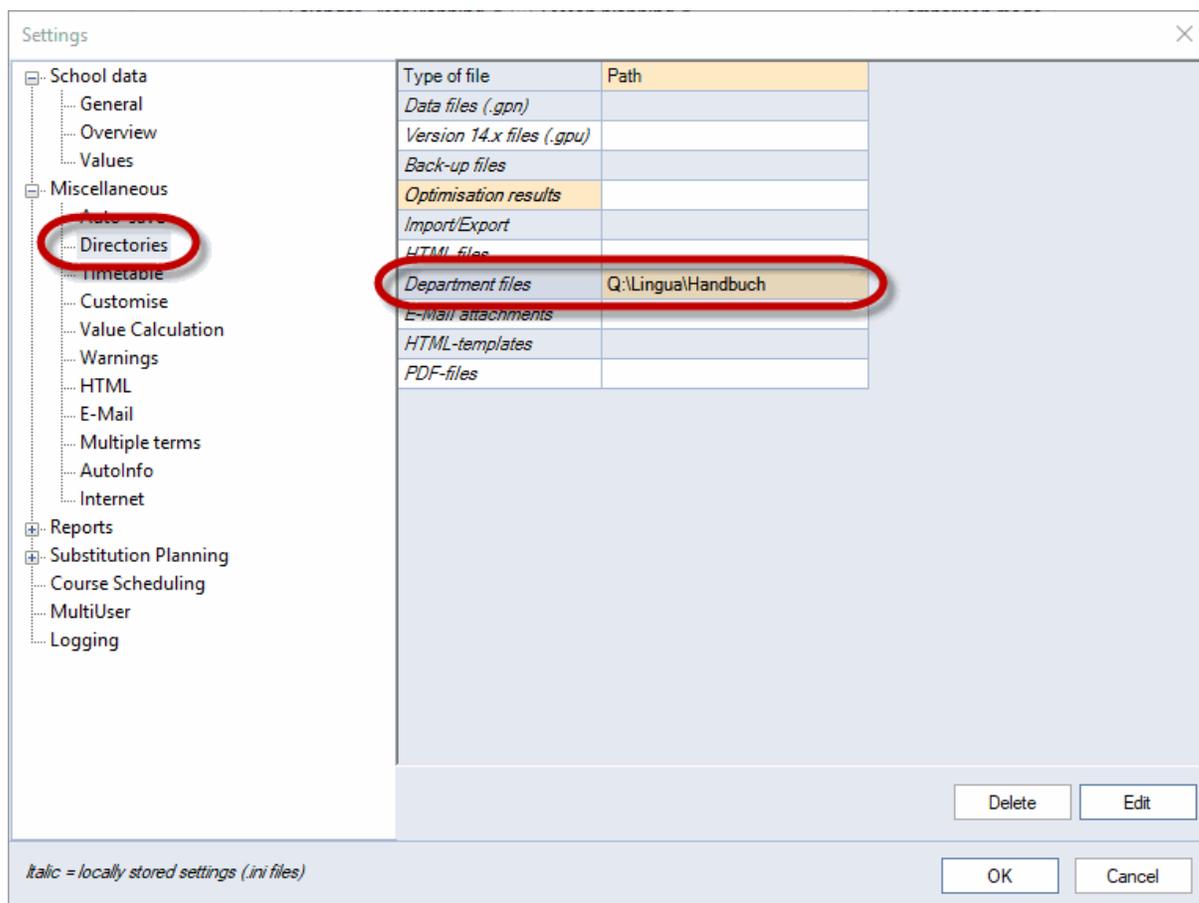
4.1   Exporting individual departments

If you wish to have more control over the creation of department files you can export departments individually. In the export window you will see the short name of the next department to be exported as well as the number of lessons and classes.
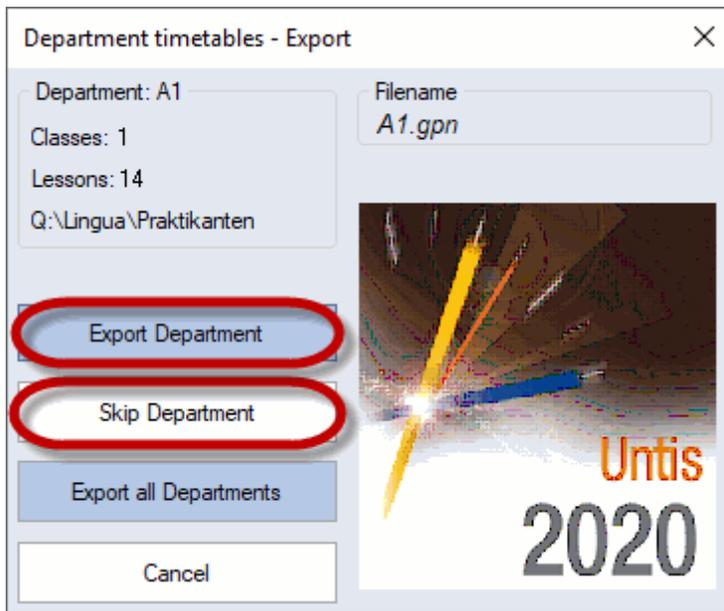
Use the <Export department> button to launch the export of the department displayed.

If you do not wish to export this department you can skip the export of this department with the <Skip Department> button and move on to the next department.

4.1.1   Restrictions in demo files

Restrictions in demo files Restrictions in demo files If you wish to try out the functionality of the department timetable with the demo files please note the following restrictions:

- The number of classes with an assigned department must be less than 4.

- The number of entered periods must be less than 4.

- A maximum of 7 classes only may be entered.

5   Creating department timetables

Once the departmental data have been distributed each department can process its own data in the same way as if the department were the whole school. The scheduler can define the periods of his/her "own" classes and can optimise the department timetable using all the tools that Untis has to offer.

It is also possible to enter additional master data or lessons that are new or that were previously overlooked. Such data are taken into account when the department data are imported into the school file.

> **Warning:**
> Data that have an effect on the complete school, e.g. time grid, should never be modified by the department. Such data are not integrated into the school file, either.

The Untis title bar displayed in each .gpn file of the departments indicates that it is a department file.

All data relating to the department concerned is exported. If cross-departmental resources are used, this data may include classes belonging to another department. In the example of department ME below you can see that 1b, 2b and 3a have been exported in addition to the classes belonging to this department. These classes are assigned to other departments but there are lessons in department ME in which they are involved.

Lesson no. 1 is one of those cross-departmental lessons which involves not only class 1a, but also 1b, 2a and 2b. In general, the department data only comprise those lessons which belong to the department.

Any lesson can now be scheduled, deleted, modified or added in the departmental files. The changes will be integrated into the overall file when the department data are imported into the school file.

6   Importing dept. data into school file

After you have created the individual departments in your timetables the department files are given to the scheduler for the overall timetable, whose job it is to integrate them back into the overall school file.

In the overall file, select 'Modules | Departments | Import' and click on the <Import all departments> button.
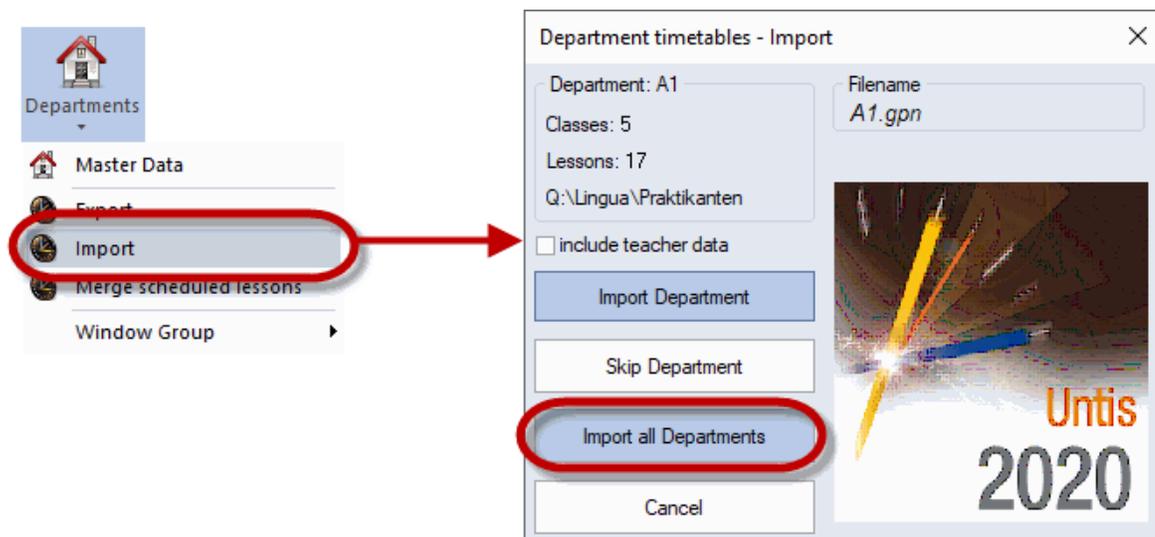
This imports all department files into the overall file. All changes made 'offline' to the distinct department files individually will be merged.

Note:
New numbers will automatically be allocated if overlaps occur with lesson numbers when the import is performed.

Clashes may occur after import if teachers or rooms are used across different departments. These will be listed in the timetable and in the diagnosis .
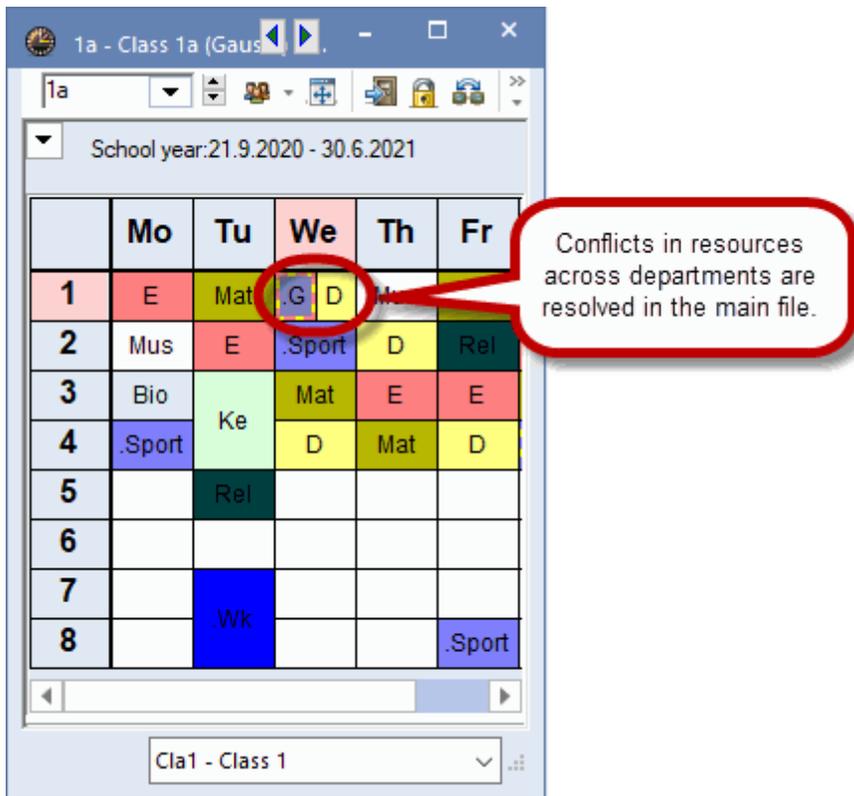
Conflicts in resources across departments are resolved in the main file.

6.1 Importing individual departments

When importing it is possible to process departments individually, similar to when you are distributing department data . The top of the import dialogue window indicates which department will be next and how many lessons and classes belong to it. You can use the <Import department> button to start importing the current department or the <Skip department> button to switch to the next department.
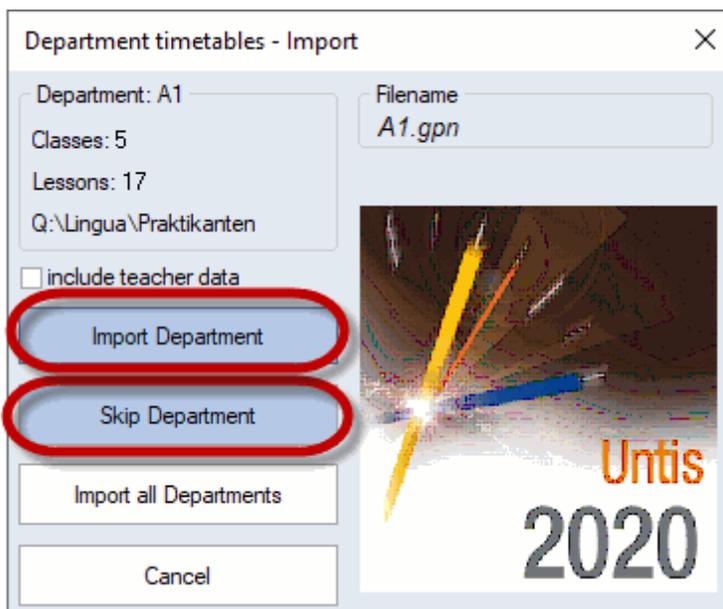
6.2 Importing master data

New master data (i.e. master data that does not yet exist in the school file) are integrated into the school file. The first department file containing the new master data therefore determines their properties, i.e. if department 1 has created the new subject 'FR' with the long name 'French language' and department 2 also creates a new subject 'FR' with the long name 'French' , the subject will be created in the school file with the data from the first file read in (department 1). The subject FR therefore has the name 'French language'.

> **Warning:**
> Master data (except teachers, see next chapter) that are not created new but just modified are not reimported, i.e. changes are not transferred.

6.2.1 Importing teachers

Working with the timetable sometimes necessitates changes to existing teacher data such as the number of permitted non-teaching periods or time requests. When importing department data you can use the selection box "Include teacher data" to determine whether changes to the teacher master data should also be imported.

> **Warning:**

If two departments have modified the same data record, only those changes from the department imported first will be included.

7   Processing the overall timetable

After all department data have been integrated into the complete school file you can continue to optimise the overall timetable.

If you have not yet taken account of shared resources such as teachers or rooms, they will now be included in the overall schedule.

Optimisation and room optimisation proceed in the usual way. If, after importing department data , teacher overlaps result because e.g. one teacher teaching in two departments has been scheduled by both departments for We-3, you can best resolve this by setting the "Lock timetable conditionally" option with Optimisation strategy A.

Room overlaps can be handled with room optimisation .

If required, the optimised overall timetable can then again be split up over the individual departments. Proceed according to the description in the ""Distributing department data" section.

8   Merging lessons

The department timetable module allows you not just to import exported department data into the overall file but also to read in master data, lesson and timetables from any .gpn file.

To do this first open the .gpn file into which you wish to import the data and select "Modules | Department timetable | Merge scheduled lessons". Navigate to the file from which you wish to import data and click the on the <Open> button.

When merging files Untis proceeds as follows:

- All master data are imported. The additional data for elements that already exist such as time requests are **not** merged.

- Lessons are imported in their entirety. If there are overlaps with the lesson numbers, the imported lessons are automatically assigned a new number.

- Timetables are also imported in their entirety. Clashes occur when times in the existing schedule and the imported schedule overlap.

- General settings such as the time grid and school holidays are **not** transferred.

9 Effects on other functions

The department timetable module also influences other Untis modules. This is described in the following sections.

9.1 Cover planning

With the department timetable module you also have the possibility of restricting Untis to a specific department using the drop-down list via 'Start | Departments'.

9.1.1 Substitutions window

The substitutions window only displays cases of substitution where the absent class or absent teacher is assigned to the currently active department.

Please look at the example in the figure below. Teacher Aristotle is assigned to department EE and class 1a to department ME.
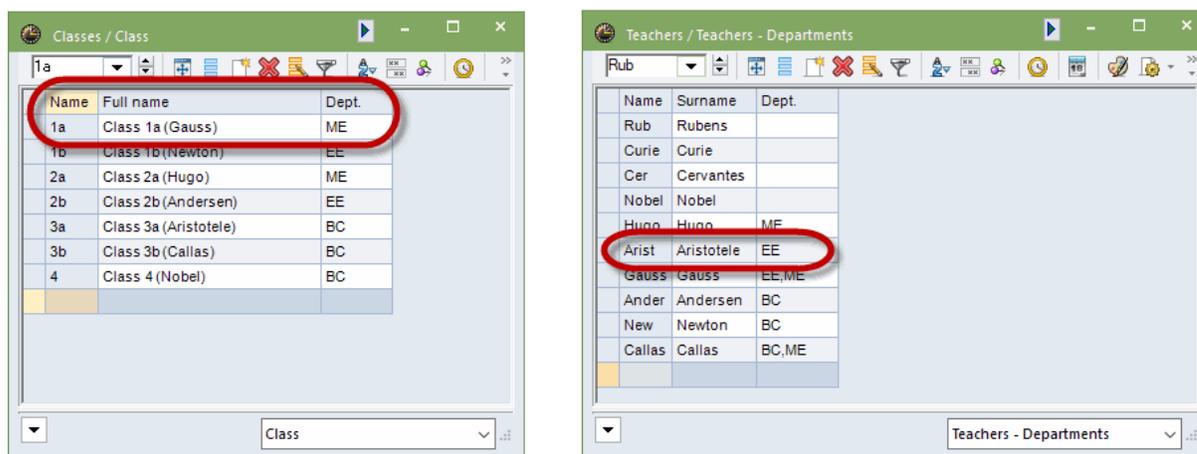
Teacher Aristotle is now set to absent on 20 September. On this day he is due to teach class 1a (period 5), as well as class 2b (period 1).

If the department drop-down list is set to department EE, all open substitutions will be listed in the substitutions window since the absent teacher Aristotle belongs to this department.

If, on the other hand, department ME is selected, only those substitutions will be displayed where an element of department ME is involved. In our example this is class 1a.

You can show the 'Dept' column in the substitution window via 'Grid adjustment' so that you can see to which department the substitution belongs to.

This way you can also filter two or more departments. No general department drop-down list may be set for this. If you want to see the substitutions of the departments mechanical engineering and electrical engineering, for instance, then enter 'ME|EE' in the filter line.

9.1.2 Scheduling dialogue

In the cover planning scheduling dialogue you can only make changes to lessons that belong to the currently active department.

9.1.3 Absences window, substitution suggestion

Only teachers who have been assigned to the currently active department or to no department are displayed in the absences window or in the substitution suggestion. Entering absences is also restricted to this selection.

9.1.4   Substitution statistics

As of Untis 2017 the substitution statistics is also restricted to the view of one department if you select a specific department under "Start | Departments".

9.2   Untis MultiUser

The user rights system in Untis MultiUser allows you to selectively define which users may view which department data. For this, select "Modules | MultiUser | User administration | Users" and make the appropriate entries in the "Departments" column
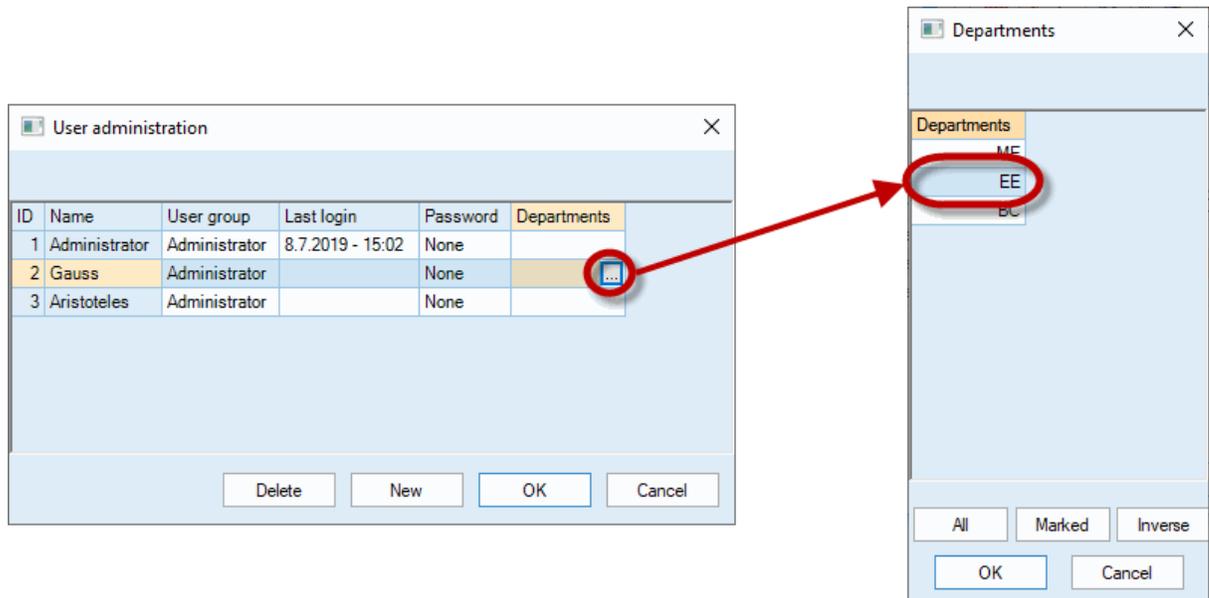
If a user now logs in and wishes to select a department from thedepartments drop-down listfor which he/ she does not possess the required authorisation an appropriate message will be displayed.

Departmental processing is significantly easier in MultiUser mode since it is not necessary to distribute the data. All departments work with their own particular users on the same database. This means that changes affecting the whole school can be made during the scheduling phase and all users will see the changed base data immediately.