



*Unified
Education
System*

Executive summary

Dear Sir/Madam,

The booklet you hold in your hands has been published to present the functionalities and innovations that the Neptun Unified Education System, developed by SDA Informatika, offers to higher education institutions. This document aims at highlighting new solutions we have developed to facilitate the everyday work and increase the efficiency of our most important customers: the colleges and universities.

The **Neptun Unified Education System** (hereinafter referred to as: **Neptun.Net**) is a dynamically evolving system that always changes in accordance with the new challenges and the existing functions of which are enhanced upon the feedbacks and requirements of the institutions.

During the years the program was extended with a considerable number of new functionalities to enable employees, instructors and students of the higher education institutions to use the advantages of an administration and education based on the most modern IT solutions to an even greater extent. In this circular, without a claim for completeness, we delineate some fundamental functions of the system without actually describing the technical content behind them in depth.

In the first part the professional competence and philosophy of our company, the SDA Informatika Zrt., are presented.

In the second part, we summarize the information on the **Neptun.Net** framework in brief. This is particularly important because it demonstrates how the program is capable to serve the increasing number of users and their needs simultaneously, and how its general features further aid the work of the users.

The next part of the document will be highlighting the functionalities in the program related to education administration. We concisely summarize how the system helps the administrative tasks of general education and the organization of teaching. The description covers, among others, online registration, trainings, subjects, courses, the management and announcement of exams, the conduct of the registration periods and various administrative areas, both from the administrators' and the students' perspective.

It is presented that with our program any institution has the option to operate its timetable editor integrated into a full establishment management.

The **Neptun.Net** offers an opportunity for the implementation of education regulations, the management of dormitory related issues, along with the execution of various other tasks. With the **Neptun.Net** one can experience the latest teaching methods of information technologies in practice. Further on, you will also read about our modules supporting the academic administration (e.g. application management, questionnaire creation, SMS service). This will be followed by the reviews of modules related to the data supply duties of higher education administration (e.g. FIR).

Finally, in the last chapter, we introduce the diverse financial functions of the **Neptun.Net**. In this section we compare the different payment methods from which the institutions are free to choose. We present the financial matrix, the system that makes the education-related accounting of the finances of the institutions transparent, simple and free from errors.

Table of contents

I. SDA Informatika Zrt.	5
Neptun modules	6
<hr/>	
II. Framework	7
Complex permission management	7
Architecture	9
Complex filters, enquiries (FDL) on each interface	11
Electronic signature	13
<hr/>	
III. Education administration	14
Online registration and modification of personal data	16
Subject recognition and equivalence	17
Textual (Meta) requirement editor	17
Final exam module	20
Integrated management of student cards	21
E-documents module	22
Electronically stored and printed grade book	22
Integrated generation of diploma supplement	24
Integrated, manifold management of timetable	25
Complex classroom and establishment management	26
Dormitory module	27
Neptun Meet Street (NMS)	28
E-learning, the modern education form	30
<hr/>	
IV. Related modules	35
Application management	35
UniPoll questionnaires	37
Neptun.SMS	40
TimeR	42
<hr/>	
V. Data supply, certificates	45
FIR data supply module	46
Student loan module	47

VI. Financial module	48
Financial matrix	49
Choice of payment methods	51
Payment by postal cheque	52
Collective account payment	53
Virtual Collective Account	54
Payment by credit card	55
POS terminal	56
Mobile payment	56
Electronic invoice	56
Automatic invoicing	58

I. SDA Informatika Zrt.

For more than ten years, the **SDA Informatika Zrt. (and the SDA Stúdió Kft.)** has been the market leader Hungarian company to develop and deliver solutions to higher education administrative systems. The main target of our company is to offer a full scale development and IT support to both national and foreign higher education institutions to efficiently face organizational and economic challenges, to keep and reinforce their market positions and to be competitive even on the post-graduate education markets. Beyond the above, it is also a significant target of our company to market our other – in many cases internationally certified – applications developed in relation to our education administrative system (eLearning module, Poszeidon Document Management and Registry System, Unipoll etc.), besides the higher education institutions, to the business and governmental spheres, too. In addition, we would also like to meet the more and more realistic demand to serve the tasks, processes of the institutions as an integrated system in a wide scope.

Achieving our targets is ensured by the high level professional work of our colleagues involved in the development and in the product support. Several of our carefully selected specialists, thanks to their permanent training, acquired MCP (Microsoft Certified Professional) and MCAD (Microsoft Certified Application Developer) qualifications; this enables us to continuously develop our complex integrated systems and supply high quality services to our customers. Our company is a Microsoft Gold Partner and an Oracle Gold Partner too.

Our colleagues dealing with product support have specifically been selected from candidates with many years' experience in higher education administration in order to furnish, on the basis of their earlier experience and practice, an even quicker and more effective support to handle questions and eliminate problems raised by the institutions.

As the satisfaction of our customers is of utmost priority for us, we apply state-of-the-art integrated development and process management systems during the development of our products, and the subsequent, further improvement and product support activities.

Thanks to using these systems our customers can continuously follow the troubleshooting status of the non-conformities they reported or the improvement of new developments they required, and if they choose, can automatically receive personal notification of developments or new releases available. Our products have their respective product support portal accessible to our customers, where detailed documentations, functional descriptions and other materials to the concerned system can be found. The support portal of **Neptun.Net** is available at www.neptun.org.hu.

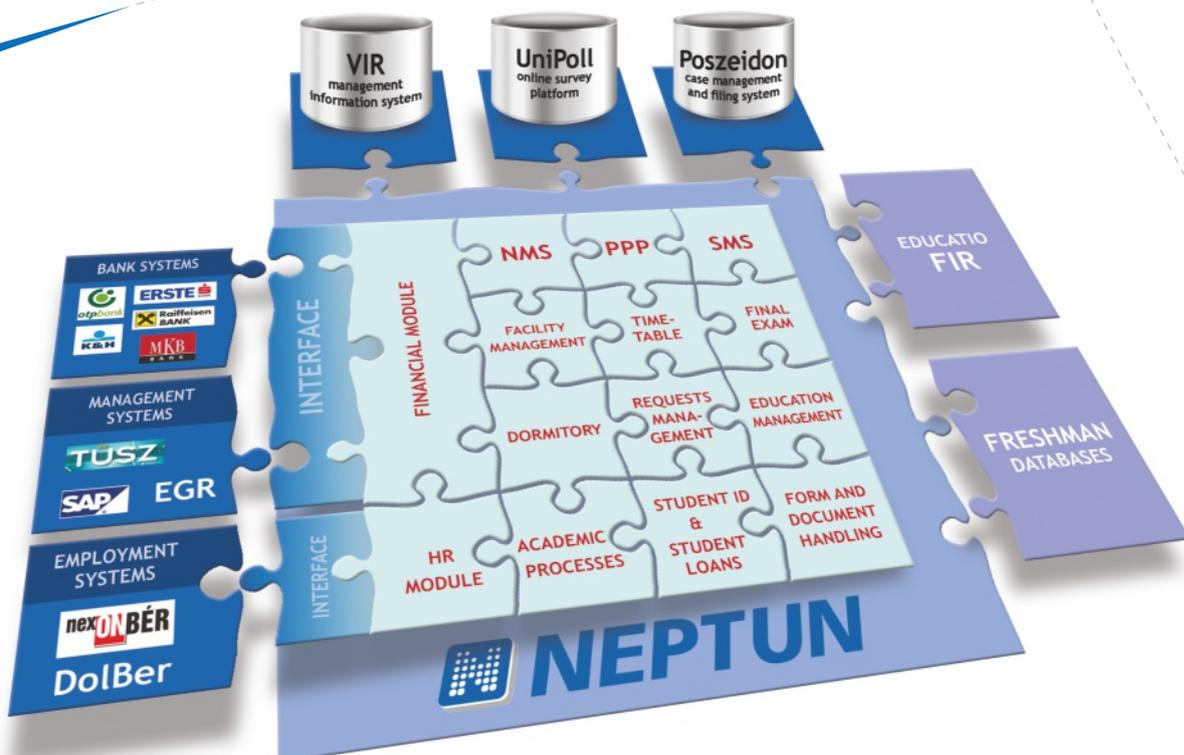
Our development and support procedures are certified by TÜV Rheinland according to the **ISO 9001** quality management system.



Neptun modules

The **Neptun.Net** Unified Education System has originally been created for electronic administration related to education, but as time progressed, the demands of the higher education institutions and the growth of other external expectations led to its completion with components, the so-called modules, interrelated with many other fields.

Beyond the strictly defined education operations, the program offers comprehensive solutions for the higher education administration, or for the implementation of tasks and duties of the students and the instructors. Complementing the studies-related part, without a claim for completeness, by now these modules cover the following areas: dormitory, finances, data supply (e.g. FIR), student's card, final exam, establishment management, HR, timetable and application manager, or simply the social network (NMS) created on the web-based user interfaces. Some modules, such as the filing system (Poszeidon) or the questionnaire maker (Unipoll), are integrated in the **Neptun.Net**, however they have also grown into independent products. Our modules are tools that support the arrangement of education issues, which assist the users and enable a faster flow of information.



Neptun modules

II. Framework

The framework of **Neptun.Net** has been designed and implemented in both contents and diversity with the utmost consideration of our customers' demands and we endeavoured to offer the latest technologies and solutions to our clients. We undertook to renew our system and modules innovatively, always abreast with the technological evolution.

Some important features facilitating the use and customization of the system:

- Dynamically editable menu structure and interfaces
- Individual user profiles
- Group operations on all interfaces
- Printing and data exporting tools on each interface (HTML, Excel)
- Data importing facilities on most of the interfaces (Excel, txt, XML)
- Arbitrary login names
- Handling password rules and login methods
- Function parameterization option
- Quick and complex search on each interface, customizable FDL filtering
- Complex, freely configurable permission system
- Message sending and handling (e-mail, SMS, internal messages)
- The client software is automatically updated to the new version.

Complex permission management

As the **Neptun.Net** is used by higher education institutions of diverse sizes and organization structures, it is fundamental that the permission system comply with the operation regulations and the organisation structure of any institute. The permission system of the **Neptun.Net** is based on roles. Each institution can define the roles in any number and of any functions.

For each role it can be determined what data can be viewed or modified with it, or what new information the user with that role can enter in the system. One user can have any number of roles. The permission is defined by matching the role and the organization unit which, if needed, can be narrowed down to further sublevels.



The permission system can for example handle the following:

- A department administrator can modify only the subjects of his/her own department, however he/she can view all subjects and model curriculums of the institution.
- A student affairs consultant can modify all data of students attending trainings that belong to him/her, while he/she has no or only limited access to the data of students attending other trainings.
- The institution leaders can see all data of the institution, but they cannot modify them.

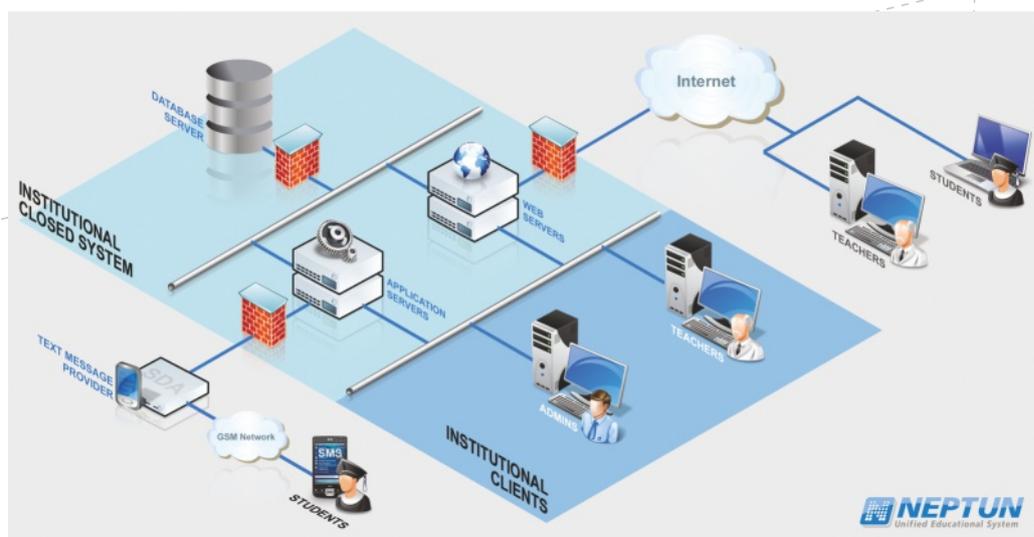
Advantages of customizable permission management:

- The various roles and related permissions correspond to any institutional structure.
- Each user has access only to the data that are truly necessary for his/her work: this simplifies the work process and reduces the possibility of errors, whereas also excludes abuse of information.
- The permission system is perfectly consistent with the enquiries, so one can make enquiries only in the data that he/she is permitted at least to view.



Architecture

The architecture of **Neptun.Net** has been developed to meet the rapidly changing and continuously growing institutional requirements for a long period. During the development of the system we aimed at satisfying the topmost professional requirements as well as meeting the formerly submitted institutional expectations.



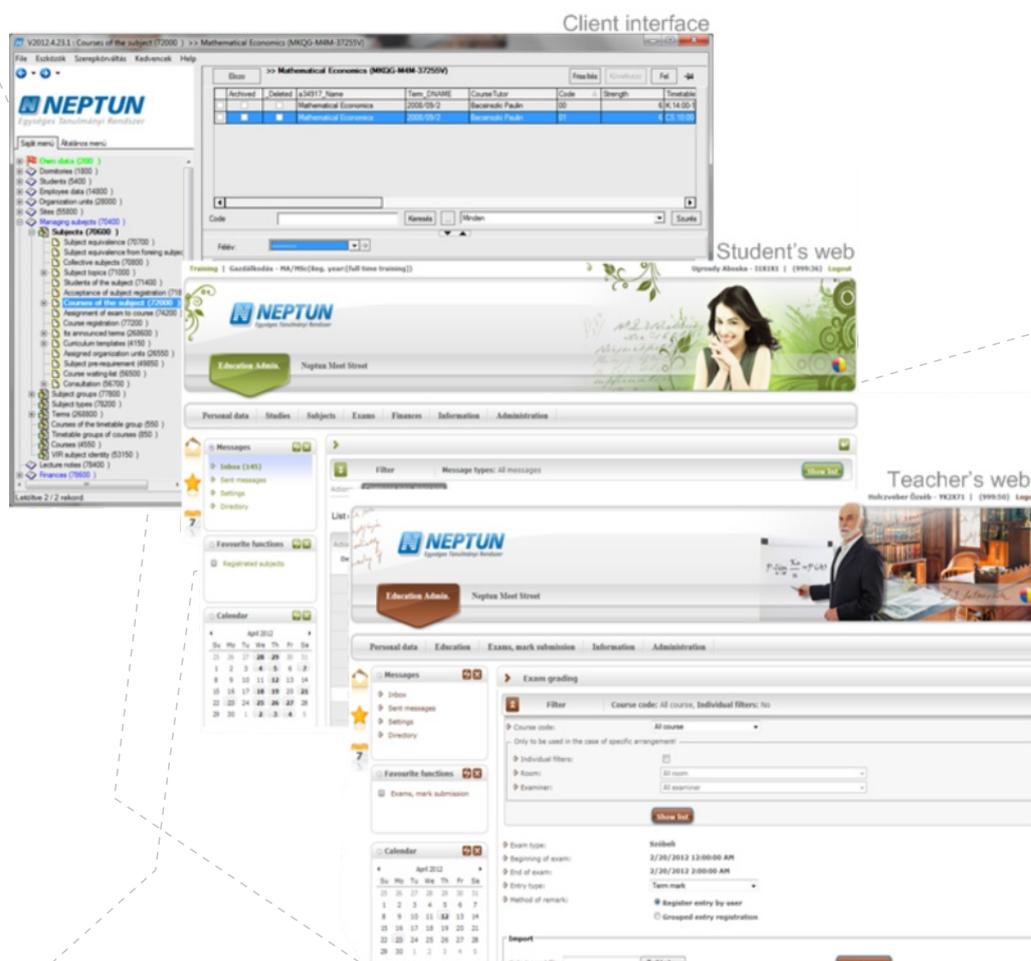
The architecture of the Neptun.Net

Most important results from the development of the architecture:

- **The system is independent from any specific database.** As institutes have taken different viewpoints on the database they would like to use, our system is not dependent on any, consequently, runs on both Oracle and Microsoft SQL databases.
- **The system is scalable.** The institute can define the number of servers in accordance with the arising load, so the system does not restrict the number of concurrent users. At periods of higher load more servers can be set up, even temporarily.
- **All student and instructor functions are accessible** through web-based interfaces independently from time and space.
- **The browser for use can be freely chosen.** Currently the MS Internet Explorer and the Mozilla Firefox are the supported browsers; however, the majority of functions can be used with other browsers as well.

- The efficient work in complex roles and tasks (e.g. data export and import; graphics etc.) is promoted by a **thin client program**.
- **Servers can be exploited more efficiently**, i.e. can be operated with higher cost-efficiency, since they, as an integrated system, must be prepared for completing centralized tasks.

The **Neptun.Net** fully complies with the above detailed and many other important criteria of the institutions so our clients can use the system in an efficient and ergonomic way.



The client and web interfaces.

Complex filters, enquiries (FDL) on each interface

As **Neptun.Net** manages a considerable quantity of data, in order to simplify and accelerate different work processes, the system enables users **on all interfaces** to display only the information required at the moment out of the queried data.

Such filters and enquiries can be **individually composed**, and both their results and the query method can be saved in the system in order to simplify the users' work. Later the saved filters and enquiries can be edited, exported or imported, even easily transferred to other users.



Easy filtering with interface enquiries, e.g.:

- List of students who fell in delay with the tuition, whose permanent address is in Eger, who are not dormitory students, and who have C-type language proficiency exam in English.

The general query (FDL) function of the administrative module can also be used for either general or **complex enquiries** at higher organization levels (campus, faculty) or at institution level. In this case the scope of data to be displayed as well as the structure and format of the output data can freely be configured.

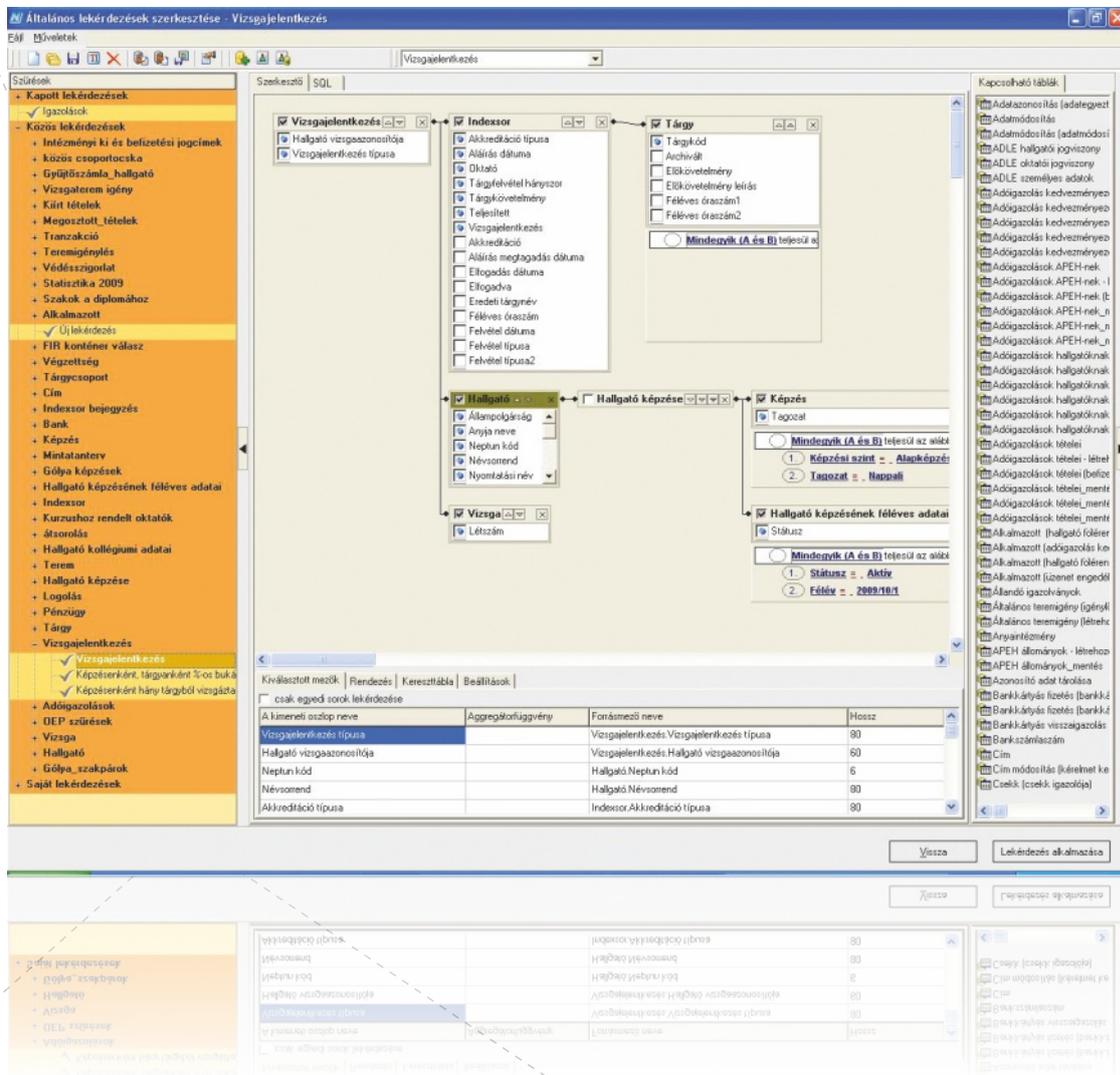
By general enquiries you can easily list, e.g.:

- The amount paid by students of a given organization unit during a particular period of time (which can also be set with parameters), sorted by type of payment (e.g. tuition, dormitory fee, repeat exam fee etc.), subtotals (by type) and total indicated, the relevant ledger number and job number all displayed in each row

Advantages of FDL:

- The users can create their own filters or enquiries that satisfy their individual requirements.
- Due to the simple and easily manageable graphical interface, no specialist is required to create or modify filters or enquiries.
- During their work, users save time by not having to manage all data recorded in the system at the same time and by being able to use filters or enquiries, even ones that were formerly created by others.

- Saved filters and enquiries can be grouped for simple data retrieval and management.
- System administrators can make filters accessible for particular or all users (e.g.: the institution brought a decision that the education administrators should remind in writing defaulting students to arrange their respective arrears).
- The permission system is in full accordance with the enquiries, so the users can launch an enquiry only in the data he/she has access to (authorized at least to view them).



The FDL query editor interface (only in Hungarian)

Electronic signature

Since Act XXXV of 2001 had come into force in Hungary, documents signed electronically can be issued. Further to this, since May 1, 2004 (joining the European Union), electronic invoices carrying equal force to paper-based ones can also be given out.

The documents provided with appropriately secure electronic signature and **timestamp** are as binding legally as the properly signed and stamped paper documents. Moreover, they possess many advantages compared to their paper-based equivalents. By signing electronically, a huge number of documents can be issued and sent to the addressee automatically; production costs and time can considerably be reduced, whereas efficiency grows.

The **Neptun.Net** system includes a certified electronic signature module certified by the **Hungarian Electronic Signature Association (MELASZ)**.

It is possible to make an electronic copy with legal effect from paper documents and to sign the electronic document simultaneously, or to have an electronic document signed by several persons.

Due to the electronic signature of increased security and the timestamp, the authenticity of the issued documents is guaranteed.



Arguments for the integrated electronic signature:

- More economical operation as a result of the reduction of paper, printing and posting costs.
- Increased efficiency, lead-time reduction of documents.
- Increased transparency.



III. Education administration

Supporting education administration is the fundamental and most substantial task of **Neptun.Net**, as more than 10 years ago this was practically the aim of the development of this system.

However, by today it includes several further functions that aim at assisting the operation of higher education institutions and rendering it more transparent.

In this part of the brochure, we present some procedures without a claim to completeness.

Due to its structure the **Neptun.Net** is suitable for carrying out a wide range of tasks that can be determined and regulated based on the organizational structure of the institution and the activities of the users. For instance, the administration of studies, education organization, department, and dormitory can be performed. During the development of the various functions, however, particular attention had been paid to enable the different groups of users to carry out more and more of their administrative tasks not tied to a specific time or place, i.e. to exempt students, instructors and education administrators from personal appointments whenever an issue arises. As a result, in institutions using **Neptun.Net** the **registration (enrollment), modification of the personal data of students, registration to a subject or exam, entering results, issuing documents, handing in applications, handling payments, students' opinion on instructors, or administration related to the dormitory as well as other additional functions are all done through the internet.**

The **organization of studies** has a particular priority in education administration. Within it trainings, departments, specializations can be generated with the respective model curriculums and subjects. For each subject and term courses can be announced specifying the instructors and the maximum number of attendants. As all substantial data related to the courses can be integrated in the system, records, statistics or reports can be retrieved in order to support the planning of the academic year. The students can obtain relevant information from the system, as the syllabus, the description of the subject or the compulsory literature can all be recorded – for example, the student can print the syllabus together with the result from the student web interface.

Thanks to the stored data on instructors, rooms and time intervals defined by the institution, the students can set up their own timetable and are able to see their own schedules.

At the same time, the instructors have access to all the information related to the students attending their course. They can keep an attendance list, give tasks to students during the term and record the evaluation of their performance into the system. They can announce an exam date, enter the signatures, marks or send a message to their own students.

By today the student web interface provides a huge number of functions, too. Once the relevant periods of the year are set, they can register for the term from home, sign up for subjects or modify all these within the set time limit. They can hand in applications in various educational and other matters electronically, which will assuredly be posted to the appropriate decision making forum. Students can promptly obtain information about each entry or modification related to their studies and personal information.

Such convenient elements of the system as the date booker (**TimeR**), the questionnaire maker and managing module (**Unipoll**) or the **Neptun SMS** module all help the students obtain information without delay.

The most important factor we have focused on during the development was perhaps to provide as much assistance to the institutions as possible in managing the complex administration of educational tasks in a simple way. Bearing this in mind throughout we could achieve for example that the higher education institutions are able to manage the entire process of the studies of their

students with the very same system in an easy and transparent way. The students' personal data, the legal training data, the **statuses of study elements**, the **financing constructions** can all be filed in Neptun.Net, to which different administrative procedures, conditions and requirements can be set, even separately.

The administrators have up-to-date information on the students' academic achievements, the number of subject registrations and exams. They can monitor the progress of student applications and enter official remarks once the decision is made, plus they can generate a resolution for the student.

The places of practical training of the students can be entered with the required data, and the degree theses can also be recorded along with their review and results.

An algorithm, which is arbitrarily defined by the Studies and Exam Code, helps the staff of the Registrar's Office calculate the end-of-term average grade. This calculation can be activated simply at the press of a button, even for each training respectively. After this the terms of the students attending the actual training can be closed in groups.

In the system a so-called **milestone** can be set, with the check of which the fulfillment of the preset requirements scheduled throughout the studies can be measured.

The advancement review gives information about the current status of the student's studies, which is indispensable when a student's conclusion of education is being verified. Fulfilling recent expectations it is possible to create reclassifications, so-called **ranking** simply.

Issuing various certificates and vouchers required by the law greatly contributes to the workload of the Registrar's Office. After selecting the appropriate template, the **Neptun.Net** is capable of generating certificates, student data sheets, grade book labels, electronically stored credit books from the stored data that can be printed even in groups. The system also assists in organizing the final exams. After recording the data of the final exam and the diploma, diploma and diploma certificate can also be printed for students.

Another area where we try to offer something new for the institutions is to raise the use of information technology in education onto a new level. This is the purport of the new platform of communication and cooperation between students and instructors, the **Neptun Meet Street**, and also of the module that enables the use of e-learning.



Online registration and modification of personal data

The option of electronic administration is present in many areas of our life and it undoubtedly makes our lives easier. During the development of the **Neptun.Net** Unified Education System we follow the principle that users be able to arrange as many academic and associated issues as possible via the internet, electronically. It is convenient for both students and education administrators that no personal encounter is needed for the student registration (enrollment) and the management of students' personal data; there is no need for the subsequent difficult and lengthy administration either, as these functions are accessible anywhere through the internet. Consequently, during the registration period, it is not necessary for the students to visit the Registrar's Office – it is enough to check their personal data on the relevant website and then click on the „Registration“ button.

There are various setting options for institutions to manage the registration. For example, the institution can define if the process of the registration should take place **automatically** or by application – in the latter case the administrator's decision concludes the process. The institution can also determine, even at faculty level, whether an earlier registration can be amended or not.

The institution, at its own discretion, can also require students to fill in an **individual registration** application, the sending and further administration of which are also possible in the system.

The benefits of the **electronic registration** exist in this case too: students are able to report changes in their personal data (address, bank account number, etc.) in **Neptun.Net**, which results in considerably less administrative tasks for the institution administrators who only have to dispose of the modification claims entered into the system (accept or reject them). Some documents can be set as authentic; consequently, once these documents are sent in by the student, the Registrar's Office does not need to require them again and again (e.g. the secondary school leaving certificate, the certificates of other qualifications, or the language exams).

Online registration in short:

- The accessibility of the registration function through internet considerably reduces both the complexity and the duration of the administration.
- Submitting changes of personal data through the Neptun.Net system makes the compliance with the obligations for both students and administrators easier.
- The system at all times provides up-to-date personal information on students.
- Setting authenticity for documents



Subject recognition and equivalence

This module has been developed to simplify the handling of subject recognition and equivalence between subjects for institutions to the greatest possible extent. The **equivalence management** function of the module provides a simple and automatic way of handling various equivalences between subjects within an institute. This is useful when a student attends more trainings in the same institute or when he/she has completed an earlier version of the subject. In such cases **Neptun.Net** accepts the fulfillment of the subject based on the equivalence rules of the system and enters the student's credit.

Another important function of the module is to **support subject recognition** in order to enable easy and automatic approval of subjects fulfilled in other institutes. When the authorized committee arrives at a decision pursuant to the standards about the recognition of a subject completed in another institution, it can be recorded in the system. Later on in similar cases there is no need to wait for the committee decision: the one the committee had made in the past can be extended to the whole system as a rule.

Advantages of subject recognition and equivalence:

- The extensible rules reduce the workload of the accreditation committees.
- It saves time and energy of the education administrators.
- In the long run it helps the development of a unified subject recognition system among institutions.

Textual (Meta) requirement editor

The requirement editor module of **Neptun.Net** helps the administrators and instructors to compose the various conditions easily and simply in the so-called meta language with the textual requirement editor.

These requirements cover a wide range of studies, and help greatly that the registration for subjects, courses and examinations in **Neptun.Net** system take place in a form that complies with the rules of the institution.

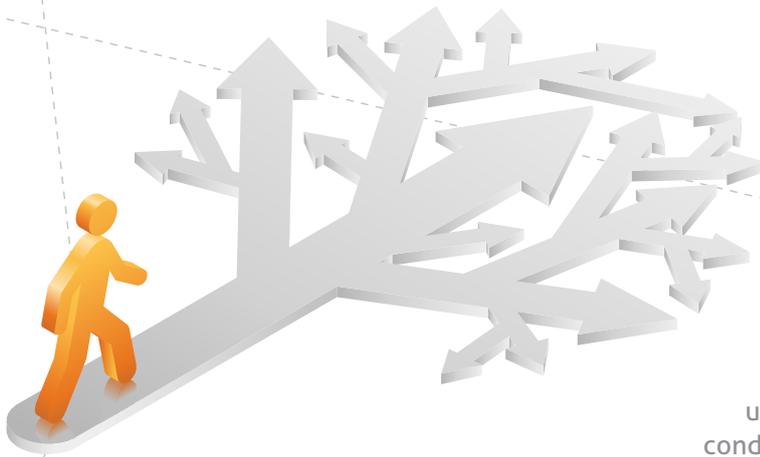
With the module, requirements and requirement systems, as complicated as the institution intends, can be defined. Beyond the use of simple, ad hoc (for example, subject, or exam registration) conditions, the system can manage the various milestones of studies, the structure and equivalence of subjects, and is able to calculate the average result with checking the conditions. These methods can also be combined with one another.

The requirements set as conditions of a subject, course and exam registration can be edited in a diverse way, either uniformly or case by case.

In order to provide even more features, the definition of the requirements of the subject and exam registration has been subdivided into two parts, consequently, it is possible to define **preliminary and final requirements**.

In the subject registration phase, by defining the preliminary requirements, the general intention of the registration to a subject can be assessed, while by running the final requirements the enrollment of a student not satisfying the requirements for registering to that specific subject can be blocked.

Preliminary and final conditions of an exam can be laid down as well. The preliminary condition runs when the student would like to register for the exam. If the result is false, the student is not able to register. The final condition for the exam registration is a requirement that can be run manually at the exam to check the students who have already registered.



Specific or general requirements can be created, too. In case of an exam registration the general requirement can be for example the payment of the repeat examination fee (in accordance with the rules of law) or the signature of the subject. It is a specific condition if the criterion for taking the subject is an earlier fulfillment of another subject.

The subject, course and exam registration conditions can be summed up by periods or training, thus a unified condition system can be worked out for certain study periods or groups.

Other meta options

Besides managing registration requirements, [Neptun.Net](#) allows to customize condition systems in numerous fields or to use various calculations with the meta conditions.

Other periods than the subject and exam registration periods can also be defined in the system, such as registration, application filling in, final exam, or specialisation registration periods; for these meta conditions can also be set.

As outlined before, thanks to the condition editor, **milestones** can be defined on the basis of a complex condition system, which the student must meet during his/her advancement. The compliance can be checked during the studies and after the graduation of the student as well.

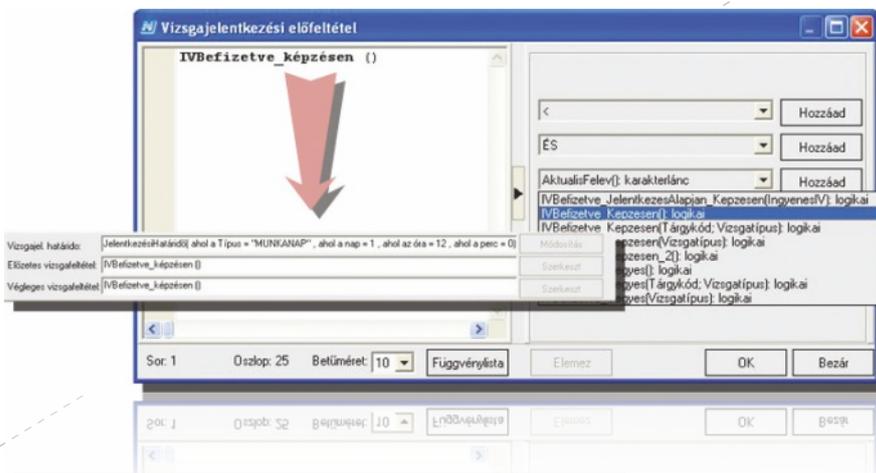
It is not only the elaboration of the conditions system that the meta editor formulas can be used – they can also be widely applied in **calculating scores**. The scores of an application can also be calculated with them – e.g. scores for a dormitory application – and the result is a rapid and accurate evaluation.

Many formulas are required to calculate the grade or the partial results of the final exam, the diploma in accordance with the demands of higher education institutions – the meta editor offers a solution for such **complex operations** as well. Processes based on such summarizing, averaging and final result calculation can be used on several interfaces – the best example for this is the **average calculation**. With the meta editor interface each institution can form its averaging algorithm according to its own Studies and Exams Code. It can be prepared on the basis of either course or department data. In addition to the basic operations, without the claim to completeness, it is possible to create computing forks, to define set-off rules by code item and to make distinctions according to the type of subject recognition. The averaging function can handle study achievements both belonging to and independent from a term.

Features of the text requirement editor:

- Management of any complex requirements of any education structure is possible in a simple and comprehensible wording, thanks to editing in the meta language.
- Owing to the unified, integrated handling, it is sufficient to lay down the requirements only once, which later on can easily be applied.
- It helps the precise implementation of the Studies and Exams Code.

Meta requirement editor window (only in Hungarian)



Final exam module

The final exam module of Neptun provides full assistance in tasks related to the organization and the arrangement of the final exam.

The module offers a big variety in managing and organizing the final exam. Depending on the announcement of the **final exam period**, students can register on the web interface or the administrator can enter the registration in the client program. The students can be matched, even one by one, to the final exam dates. Conditions can be defined for the final exam registration. The student can see the time rendered to his/her registration, consequently, the separate notification of the students can be avoided.

According to the final exam procedure of the institution it is possible to announce final exam period, final exam and final exam subjects/exams. **Committee, committee members, and classrooms can be assigned to the final exams and classroom reservation can be made.** After the selection of the committees it is clearly seen which committee members had been assigned at what time and into which committee.

The exam and subject results achieved by the students at the final examination can be recorded. The keeper of the minutes can enter the results directly into the Neptun final exam module. According to the specified algorithm the result of both the final exam and the diploma can be calculated on the basis of the recorded results, even already at the exam. The calculated final exam result is added to the final exam data of the student's studies, just like the diploma result to the diploma data. This eliminates manual data recording.

Final exam minutes can be printed for the final exam, per student or cumulatively. Documents can also be attached to the final exam.

The significance of the final exam module:

- The student registers for the final exam simply on the web interface and he/she can see the data related to the final exam.
- Final exam registrations and the management of final exam arrangements are much simpler for the administrators.
- Final exam report can be printed in institutional form according to demand, and with the required data.
- By recording the final examination results, the data are being stored in the database too.
- The final exam result as well as the diploma result can be calculated.
- The storage of final exam results is tackled with.

Integrated management of student cards

Neptun.Net can provide an integrated storage for all student data specified by law and comprehensively support the various administrative tasks in relation to student cards.

The system provides a complete solution to the administration related to student cards in all phases, including the application, the actual status of location and times of the cards, the filing, the validation and the issuing.

In accordance with the provisions set down in the relevant governmental decree, the system can handle the **electronic application of a student card** too. Students launch their electronic applications on the web interface and can even pay the corresponding fee in the appropriate menu of the financial module, which is yet another convenient feature. The further administration of the electronic application can be carried out in the client program.

The ability of **Neptun.Net** to cooperate with the bar code readers is an immense benefit in the filing and validation of student cards.

On top of the above listed features, the **Neptun.Net** helps keeping a register of temporary applications for student cards with the issuing together with the identity sheets and stickers.



Advantages of the integrated management of student cards:

- Reduces the workload of administrators in relation to the student cards.
- The possibility of errors and misuses is excluded.

E-documents module

In the e-documents module of the [Neptun.Net](#) it is possible to issue, from the data stored in the system, student data sheet, electronic student grade book, as well as electronically stored and printed grade book.

The issuance of the **student data sheet blanks** from the program replaces the use of the traditional student grade books, which were filled out manually and were uploaded with grade book copies by the institution in accordance with the formerly used procedures. In this process the retrieval of data was difficult, the storage and the binding of the finished ones were expensive.

The student data sheet, which can be printed from the Neptun Unified Education System, offers a solution for this problem. The student data sheet contains information in accordance with the rules of law. The printed form of the blanks can be elaborated by the institution according to its own demands and it can differ from the preset form. The rules of production however must be set in the institution's own code.

When the student data sheet is printed, the blanks are always filled out from the data available in the program. The time of the issuance and the issuing person are recorded, thus the issuance records of the student data sheet are immediately retrievable and traceable. Besides the ordinary paper based form, the student data sheets can be stored in pdf format too.

With the **electronic grade book blanks**, the data contents correspondent to the traditional forms of grade book pages can be printed in an etiquette form. The various pages, such as the student data, the grade book row remarks, resolutions etc. can be printed onto etiquette. The printed labels are stuck into the traditional "black" grade book.

Electronically stored and printed grade book

With the electronically stored and printed grade book blank every page of the student grade book can be printed at the same time in A/4 format. The data that can be shown on the form are shown in accordance with the law. The institution can design the format of the electronically stored and printed grade book according to its own demands, so it can be different from the preset format. The procedure however must be laid down in the institution's own code.

When the electronically stored and printed grade book is issued the actual data in the system are used. The display array of the data can be controlled by setting conditions. Several types can be made from the blank so at different educational levels the issued electronically stored and printed grade book can display different data.

The fact and person of the issuance, and the issued electronically stored and printed grade book as well as the issued blank are stored. Thus, the issued electronic



grade books are retrievable and traceable. After issuing, the blank can be "sealed" to prevent further printing. Replica of the issued blank, however, can be prepared.

The use of the electronically stored and printed grade book fully replaces the traditional "black" grade book. By using it, there is no need for storing grade books, issuing them for students, continuously monitoring the data and recording the instructors' evaluations in them. According to the regulations the students receive their grade book after the accomplishment of their studies. The instructors enter and record the results in the program – in case of certain types of exams a grade sheet is issued. A separate blank serves for certifying the term fulfillments. The issuance and processes protocol of the electronically stored and printed grade book is laid down in the institution's code.



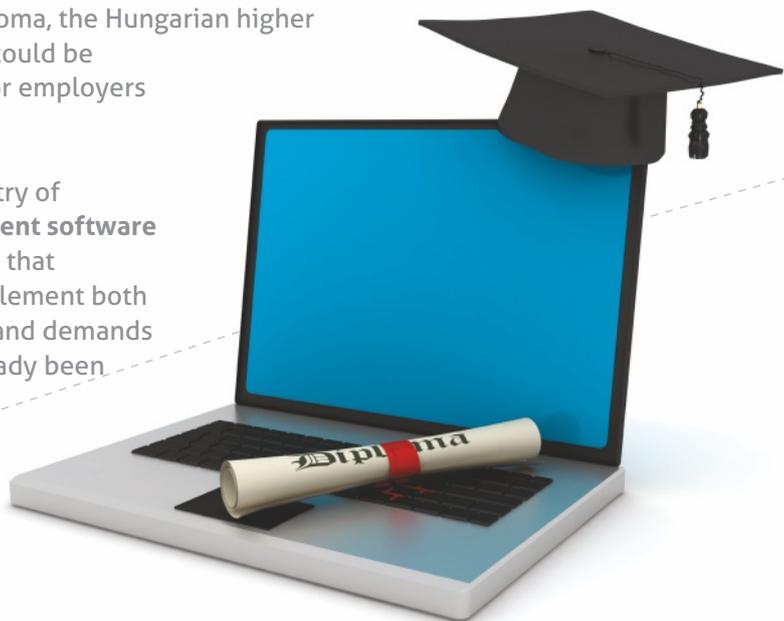
About e-documents:

- Replace preparation of the traditional student book.
- The blank is always prepared from the actual data the system stores.
- The issuance of student data sheet blanks and the issuing person are stored in the program.
- The storage and issuance of blanks result in significant reduction in human resources and expenditure.
- Data changes are maintained and monitored in one system.
- For all three types of e-documents a variety of forms are available.
- The procedure is much simpler for instructors, students and administrators.

Integrated generation of diploma supplement

The diploma supplement (DS) is a certified official document issued along with diplomas by the Hungarian higher education institutions in conformity with the EU provisions. This document comprises information on the completed education, the academic achievements, and any other relevances (e.g. the higher education institution that issued the diploma, the Hungarian higher education system etc.), i.e anything that could be important – beside the diploma itself – for employers and education institutions.

Our company was entrusted by the Ministry of Education to develop a **diploma supplement software in full conformity with the EU provisions** that generates and archives the diploma supplement both in Hungarian and English. Requirements and demands arisen during the development have already been integrated into the [Neptun.Net](#).



Advantages of the integrated DS software:

- With the processes integrated in the system the education administrators save precious time.
- The produced diploma supplements are stored in the system for a long time in a secure and retrievable form.



Integrated, manifold management of timetable

The timetable management module is an important part of the **Neptun.Net**: it enables the institutions to create their timetables in an easy and simple way. When building the module we had focused on developing a multilateral module that can be adapted to any education scheme. We also aimed at greatly simplifying the process of preparing the timetable.

In the **timetable management module**, the institution can manage classrooms, times and instructors with the same application in accordance with their own requirements. Both the timetable and the ringing schedule of each division, site, training, or organization unit can be managed individually, and the system is able to handle public holidays too. The completed timetables can be exported from the system, or timetables produced by others can be imported in a predefined format. The appearance of the timetable is highly customizable, and there is a possibility to enter more timetable items at the same time:

About the integrated manifold timetable management in short:

- All timetable information within the same institution can be found at the same place, in an integrated form, that can be easily managed and customized to the institution.
- Thanks to the integrated automatic functions, it helps avoid coincidences and overlapping of times, classrooms and instructors of the various classes and other problems that may occur when a timetable is made manually.
- It helps to coordinate the various demands in the course of the timetable creation.
- Thanks to the graphical display the instructor and classroom occupancy can be examined in advance, so it is expressive, visual and perspicuous.



Timetable in the client program and on the web interface

Complex classroom and establishment management

The **establishment management module** is an integral part of the **Neptun.Net** system, which enables the institutions to manage their classrooms by physical or logical grouping, and makes classroom administration effortless and uncomplicated.

For each room you can define individual equipment and resources as well as different preferences related to their use, and whether the room can be reserved for the purpose of external events or conferences. As part of the establishment management (classroom management) module a device inventory can be managed in relation with or independently from the classrooms.

In order to further simplify the administrative tasks, rental fees can also be assigned to rooms for rent, and time limits for renting can also be configured.

Advantages of complex room management:

- All information related to classrooms and device inventory can be found at the same place, in an integrated form that is easily managed.
- Timetable preparation will be simplified, more comprehensible and controllable.
- It enables an integrated and comprehensible management of both occasional and regular needs for rooms.
- It provides assistance to institutions to use their resources more effectively.



Dormitory module

In order to help higher education institutions to meet their administrative requirements at the lowest cost possible, our company **has developed a special module to simplify and automate administration issues related to dormitories.**

The module enables the registration of dormitory buildings, storeys, rooms and their equipment. This dormitory module includes up-to-date data management facility to register moving in/out, registrations, rentals etc. of students and guests.

Further to this, the program enables financial management of the dormitory. Since the system is linked to the student website too, the students have the option to submit their respective claims for housing in the registration periods, while the already admitted members can efficiently arrange their everyday matters.

With the dormitory module:

- The system reduces paper-based administrative work required to dormitory administration to a minimum.
- The module helps the institution to have up-to-date, well-structured information of dormitories and admissions.
- There is a full scale management of dormitory payments, thanks to the integration into the complex financial system of Neptun.

Neptun Meet Street (NMS)

The renewed module of **Neptun.Net**, the **Neptun Meet Street** is an initiative with which we intend to unify and facilitate the communication and cooperation of instructors and students of an institution.

The information flowing through many kinds of channels and platforms nowadays, and often difficult to have access to, is structured in Neptun Meet Street in a unified form, and so can be reached through the internet anywhere and at any time.

Name	Type	Permission	Set favourites
Finance - MKQB-P3P-76366V (69)	Other	Administrator	Opened Remove from favourites
Investment Decisions - MKQB-S2B-51679E (10)	Course	Guest	Opened Add to favourites
...

Neptun Meet Street on the student web

The elementary unit of Neptun Meet Street Meet is the virtual space

Virtual spaces are the basic tool of communication between students and instructors. The virtual space is a web platform where students and instructors can exchange their opinions in specific topics publicly, create forum topics or comment on the existing ones, and they can upload documents for themselves or can also publicize them for the members of the topic group.

They can create a community with members of certain groups (e.g. students of a course) or can optionally form new user groups in their own virtual space. News can be recorded by users to their own virtual space, and it is possible to survey news of the virtual space.

On the virtual spaces interface the user can see the subjects, courses and the virtual spaces related to them, and which are matched with him/her, and from here he/she can access all functions related to virtual spaces, such as the forum and document library. The system automatically generates a virtual space of each subject and course included in the **Neptun.Net** Unified Education System.

Besides the automatically created virtual spaces, the instructors and administrators can create virtual spaces for a group, the members of which they can assign. With this latter function the advantages of the Neptun Meet Street become available for bigger, homogeneous groups (e.g. students of a department or a course) as well as for smaller, specific groups (e.g. Student Group, specialized seminar groups). They can be used for general communication too (e.g. institution news, students' union, student welfare committee).

Features of the Neptun Meet Street:

Forum

The forum function is the tool of everyday communication in virtual spaces. Posts can be created on an easy html editor interface, consequently, they can be formatted in many ways, and images, links and materials uploaded into the document library can also be inserted. The post can be viewed in chronological order and in accordance with the structure of the conversation.

The administrator of the virtual space has moderator authorisation as well, so he/she is able to delete inappropriate entries.

All students and instructors are able to view and edit their respective forum data sheet in the virtual space. Photo and forum signature can be uploaded into the forum data sheet.

Document library

This feature is intended to enable users to quickly and easily upload and share various materials in the system.

Respective document libraries belong to virtual spaces and to individual users. The available memory area for users can be set individually and in groups according to the needs of the institution.

Once the documents are uploaded they can be attached to any number of virtual spaces and forum posts, without having to allocate the valuable memory space for each action, since the attachment is only a link to the document.

Distribution, submittal and evaluation of during-the-term tasks:

With this function both the lecturers and students can comply with their obligations related to the during-the-term tasks. The instructor distributes the tasks, gives the details and deadlines, and following the completion of the task the students are able to submit the material through the system; the instructor can download it and enter the evaluations of the students – and all these at one place. Students can have a discussion with the instructor about the specific tasks at separate, „private forums“.

Enrollment lists

The virtual space members can orchestrate their joint activities with the enrollment list – for example it can be used to organize study groups or to enrol to a consultation. Any member or administrator is authorised to create an enrollment list in the virtual space.

Blog, message board

This function allows instructors, administrators to share news – either one that concern a group or one that is of general interest – with students in the Neptun Meet Street module.

News

This function allows instructors, administrators to share news – either one that concern a group or one that is of general interest – with students in the Neptun Meet Street module.

Voting

With the voting function it is possible to collect the opinion of virtual space members on certain topics within the virtual space to which the answer consists of pre-defined answer options.

E-learning

It is possible to assign material to and delete from the virtual space, moreover statistics related to the material can be viewed as well.

E-learning, the modern education form

Neptun hallgatói bemutató

3 Tárgyfelvétel
3.7 Tárgyjelentkezés menete

Tanulmányi rendszer

Válassz ki, melyik félévre szeretnél tárgyat felvenni.

A képzésedhez tartozó tárgyakat mintatanterv(ek)be rendezik, a tárgyak a te képzéseden lehetnek kötelezőek, kötelezően választhatóak vagy szabadon választhatóak.

Ha beállítottad a szűrőket, akkor kattints ide, hogy kilistázd a szűrési beállításoknak megfelelő tárgyakat.

A szabadon választható tárgyak kezelését az intézmény többféleképpen oldhatja meg: szerepelteti a **mintatantervben**, vagy alkalmazza a mintatantervhez rendelt **egyéb szabadon választható** tárgyakat. Ekkor megjelenik az „Egyéb szabadon választható tárgyak” lehetőség.

Csak a meghirdetett tárgyak

Időszak kezdete:

Időszak vége:

Tárgyak listázása

Az opció kipipálásával biztosíthatod azt, hogy a megjelenő tárgylistában csak azok a tárgyak jelenjenek meg, amelyek a kiválasztott félévben meghirdetésre kerülnek. Ezt éppen ezért általában **ajánlott kipipálni**.

Itt határozhatod meg, hogy csak olyan tárgyak jelenjenek meg a listában, amelyek kurzusa a beállított időintervallumra esik.

Ha elolvastad az oldalt lapozz tovább!

tovább
vissza
tartalom
komentár
súgó
oklevél
kilépés

E-Learning guide for subject registration (in Hungarian)

Standardization and the SCORM

The **SCORM** (Sharable Content Object Reference Model) is the standard set up by the so called Advanced Distributed Learning (**ADL**) organization. This organization was founded in 1997 jointly by the U.S. Department of Defense, Ministry of Labour and the White House Office of Science and Technology in order to provide a single system for the recommendations in the field of e-learning and to qualify programs developed on the basis of the drawn-up standard.

A particularly important prerequisite of the mass spread of e-learning is that a material standard, that is adopted and complied with by all participants of the industry, should exist. This is of utmost significance, because there are many material-making and material-player solutions on the market, and in order to make the **e-learning** a really cost-effective solution in the education process, these different systems should be interoperable: a material produced in any system should be suitable to be played with any other player software.

From the very beginning the developers of the Neptun bore in mind to make the completed product meet the recommendations of the SCORM standard. As a result, already on November 15, 2005 it acquired the certificate according to the SCORM 1.2 standard.



Just one year later, on November 16, 2006 the ADL certified that the program is also correspondent with the latest SCORM standard of 2004. We are especially proud that our system is the 10th in the world and the 1st in continental Europe to acquire both certificates.

Uploading and playing e-learning materials

The materials can be both uploaded and played on the online interface. No particular program is required to play the material, just a computer with internet connection and a browser (e.g. Internet Explorer, Firefox).

Management of permissions relevant to teaching materials

In case of electronically available teaching materials the key question is which users can view and/or edit the individual materials and who are authorized to upload materials. If the SCORM-based NMS is used, when a teaching material is uploaded, it can easily be assigned to either certain or to any group of users.

Logging of student activities and preparing statements

An important advantage of e-learning compared to traditional learning materials is that the students' activities can be easily followed up with the computer system, the acquired knowledge can be verified immediately and in an integrated form, and the instructor receives automatically prepared reports about the students' progress. These options are also available in the system, and accordingly, the instructor can receive report about the length of time each student had dealt with viewing the material, which parts of the material they had processed, and what results they achieved in the various tests related to the material.

The features of e-learning:

- The trainings become more transparent, can be planned more flexibly.
- It simplifies the work of instructors, as a once completed course material only needs to be updated.
- It revolutionizes correspondence and distance learning, since significantly more students than before can be educated at high-quality level.
- The training becomes more flexible also for students as they are able to access e-learning materials at any time and anywhere.
- It promotes the development of a modern institution image which is a competitive advantage compared to other institutions.

Further features of the Neptun Meet Street:

Useful links

Links can be recorded in relation with the virtual space. This is possible for any member of the virtual space.

Linking virtual spaces

Subordinate virtual space can be defined in the virtual spaces. Thus information recorded in the virtual space can be viewed in each subordinate virtual space. Due to the joining, a document can be shared with members of more virtual spaces as well without assigning it to every virtual space separately.

Announcing a meeting

It supports recording of meetings, which participants automatically (in the form of internal message/through e-mail) receive an invitation to. We can also get information in a separate message about any change in the announced meeting (modification, cancellation).

Usage of the calendar

A more detailed timetable, containing more information (that is a calendar), is available in the NMS module. In addition, it is an important achievement that the NMS takes the course and subject schedules over automatically from the Education System, thus the full lesson and exam schedules of the users are automatically added to their personal calendars.

Besides the types of lesson and exam entries, meetings, enrollment lists and task-type entries are also displayed in the calendar.

What does Neptun Meet Street offer for higher education institutions?

- Modern, 21st century methods of communication and cooperation.
- More efficient, more regulated, more transparent and standardized operation.
- Time, energy and cost saving thanks to the uniform, simple procedures.
- Easier, faster information sharing with the simple and efficient publication interface.
- It creates a student and environment friendly (sparing paper) institutional image.
- In cooperation with the [Neptun.Net](#) LMS 3.0 E-learning system it is able to standardize and facilitate communication with e-learning trainings of any education institution or company.
- When producing NMS, our company endeavored to employ the data and functions already existing in the Neptun.Net Unified Education System to the maximum in order to make the use of the program much easier and more convenient for the users and maximizing the potentials of integration. As a result, users can log into both systems with the same Neptun code and password and they do not have to upload either their personal or their educational data separately.



What does Neptun Meet Street offer for instructors?

- A unified interface for communicating with students, featuring various functions, including sharing information, uploading lecture materials or managing during-the-term tasks.
- A unified framework in which all the courses of the instructor can be viewed and managed.
- It helps the information flow since it is impossible that the information recorded in the system is lost.
- Freer schedule, since the system is accessible from anywhere, at any time. Consequently, the use of the system makes the personal presence of the instructor unnecessary, for example when the during-the-term tasks are handed in or when he/she wants to share information with the students.
- An extended schedule, i.e. a calendar is available for the instructors.
- NMS takes over the course and subject schedules automatically from the Education System, thus the full lesson and exam schedules of the users are automatically added to their personal calendars.

What does Neptun Meet Street offer for students?

- A unified interface for communicating with the instructors and other students.
- Easier orientation in institutional procedures, regulations.
- Unified framework in which all of his/her courses can be viewed, the related information can be obtained and his/her tasks can be handed in.
- It helps the information flow since it is impossible that the information recorded in the system is lost.
- Freer schedule, since the system is accessible from anywhere, at any time. Consequently, the use of the system makes the personal presence of the student unnecessary, for example when during-the-term tasks are handed in or when information sharing conferences are held.
- An extended schedule, i.e. a calendar is available for the students.
- NMS takes over the course and subject schedules automatically from the Education System, thus the full lesson and exam schedules of the users are automatically added to their personal calendars.

IV. Related modules

Application management

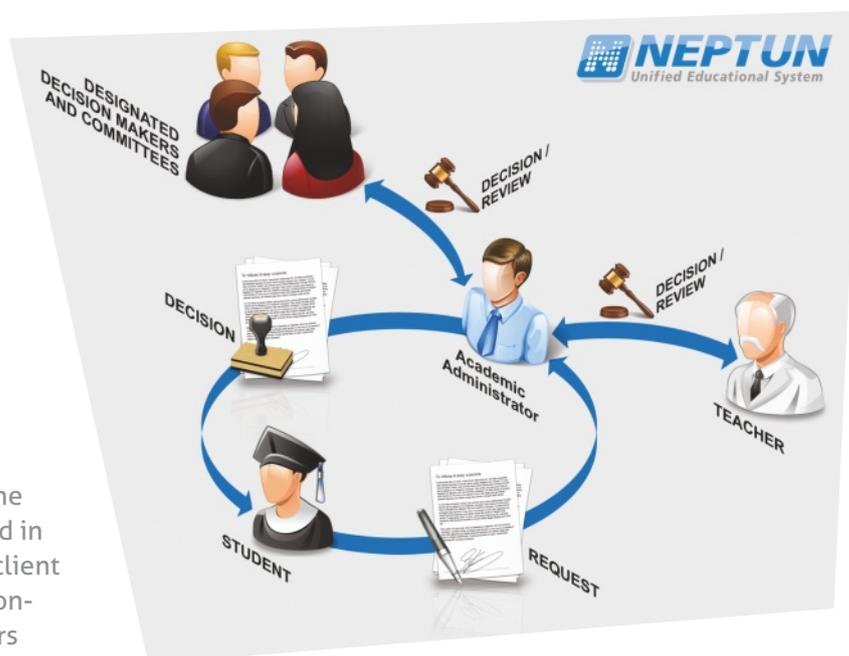
The **application management module** of **Neptun.Net** supports the further simplification and higher speed of processes related to education administration, which allows the institution employees to create any format of application template in the system that the students can later fill out and hand in through the web interface.

Students can also attach documents to the applications. After handing in the applications, the students will also be able to monitor the decision process online, and besides, they receive a message automatically when the decision about their application is made. Moreover, the applications handed in can be downloaded from the system in pdf format.

The administrators can create and format the application templates with an easy-to-use editor interface. The student data, stored in the system, are automatically inserted into the application. In addition, by assigning different control elements (e.g. radio buttons, drop-down list, text box etc.) to certain fields of the application, the administrators can regulate the method of providing the data required to fill in the application. Once the templates are prepared, they can be assigned to organization units of the institution and become available for all the students entitled to fill in the application within the specified validity period.

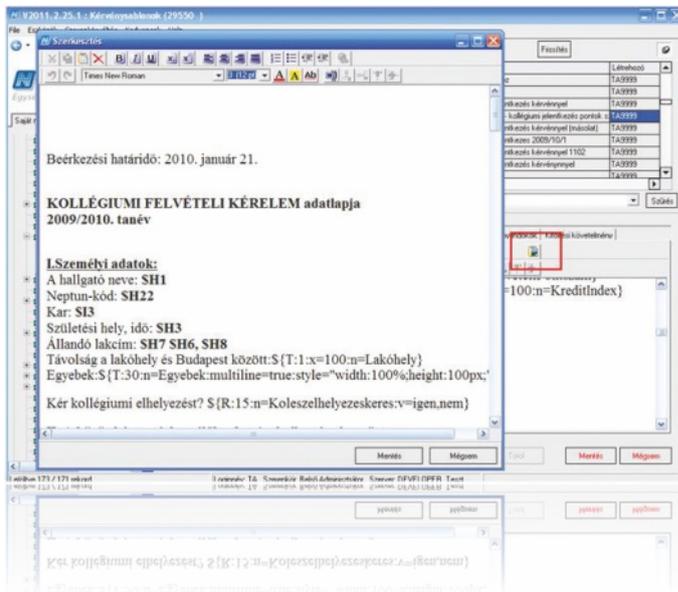
On the basis of the institution's procedure code, it is possible to **specify an administrator, an opinion- or decision-maker to the applications or to the application templates.** Administrators can process and view the applications handed in by students in the client program; the opinion- and decision-makers both in the client program and on the student as well as the instructor web interfaces. If required, pre-defined criteria for opinion and decision-making can be recorded for the processing of the applications. Answers given by students in the application template can be imported and be used in other programs too.

Official entry and resolution can be created from the processed application, which are added to the official entries of the student, too. The official entry and resolution created from the application can be viewed on the student web interface as well.



The phases of credit transfer application

The **types of application templates**: general, student registration, dormitory registration, final exam registration. Consequently, depending on the type, application templates can be used at student registration, in the dormitory module and in the final exam module as well.



The editing of application in the client (in Hungarian)

Requirements can be specified for the filling in of the application templates. Points can be calculated when the applications are handed in – these can be used for example in case of social requests and dormitory registrations.

Advantages of application management module:

- It reduces time and energy for both education administrators and students, since it eliminates the need for paper-based or personal administration.
- It reduces the paper use and mailing charges of the institution.
- The processing time of applications is significantly reduced.
- Ensures the long-term storage, retrieval of issued applications at the cheapest level possible.
- Application administrators, consultants and decision-makers are informed with automated messages about the applications to be processed.
- The student can follow up the process and the status of the application from handing it in until the decision is made.
- Automatic messages notify the students immediately of the application process.

UniPoll questionnaires Simply, rapidly

The assessment of results, the continuous monitoring of the colleagues' opinions, and the evaluation of these data are integral parts of a modern management in order to sustain a dynamic development and quality goals. Since 2005 when the Higher Education Act came into force, the implementation of quality assurance systems has become a statutory obligation for the institutions.

For a preliminary survey to help determining goals and policies or for the post-evaluation of a project, the most informative method is the questionnaire. With our questionnaire-maker system you can easily create your own questionnaires to instructors, employees, students; you can quickly summarize the students' opinion on the work of instructors and you can even publish it on your website.

The screenshot shows the UniPoll website interface. At the top, there's a navigation bar with 'TOUR', 'PRICING', 'KNOWLEDGE BASE', and 'ABOUT US'. A main banner area features the text 'Sophisticated surveys' and 'More than 20 question types, multiple branches, optional blocks and a lot more. Even the most demanding survey designers are served.' Below this, there are three columns of text describing different user types: 'Personal use', 'Small and Medium Enterprises', and 'Corporations'. A large green 'SIGN UP' button is positioned on the right side. The bottom section includes 'UniPoll News and Events' with dates and headlines, a 'Clients' section with logos of various institutions, and a footer with contact information and legal notices.

Do you use Neptun? Employ our UniPoll service as well!

The Neptun module integrated with the UniPoll system allows the students to express their opinion on the instructor's work or to create general questionnaires among the users of Neptun.Net, which the student can fill out when logged into Neptun. If required, the student can receive a message of unfilled questionnaires every time he/she enters the program, until he/she fills them out. This ensures a high rate of completed questionnaires.

Thanks to the user groups or specific types of chapters of Neptun our questions can be addressed to specifically those whom we intend. Whether it is the chapters of a question group about an instructor, a chapter related to courses or any other general questions, it is enough to prepare the questionnaire only once, then it can be assigned to any instructor, course or user group.

The UniPoll reaches the database of [Neptun.Net](#) in such a way that if a modification is made in either system (Neptun or UniPoll), the other program undergoes the same. Consequently, the user does not need to worry about the anomalies that otherwise might occur due to the data changes, as in any circumstances the most recent data are used.

Would you like to prepare a survey among your employees?

Send the either anonymous or personalised questionnaire to your employees by e-mail. You can customize the text and form of the notification e-mail to your taste, and you can edit it on a simple, easy-to-use interface. By opening questionnaire with a click on the url inserted in the letter sent out, the pollee can give his/her responses online. If the respondent does not have time to complete the questionnaire, he/she can interrupt it at any time and next time he/she can continue where he/she stopped before.

Would you like to hold an anonymous voting?

Is it a Students' Union election? Senate secret vote? Everybody can cast a vote for his/her candidate comfortably even from home. The partial results can be withdrawn at any time during the voting, while after the completion of the voting you immediately learn the precise results.

Would your alumni office like to prepare a survey among graduated students?

Assign even thousands to fill in your questionnaire simultaneously and follow the career of your old students. Questionnaires can be sent out by e-mail, published on alumni websites or even on the Facebook.

Question types

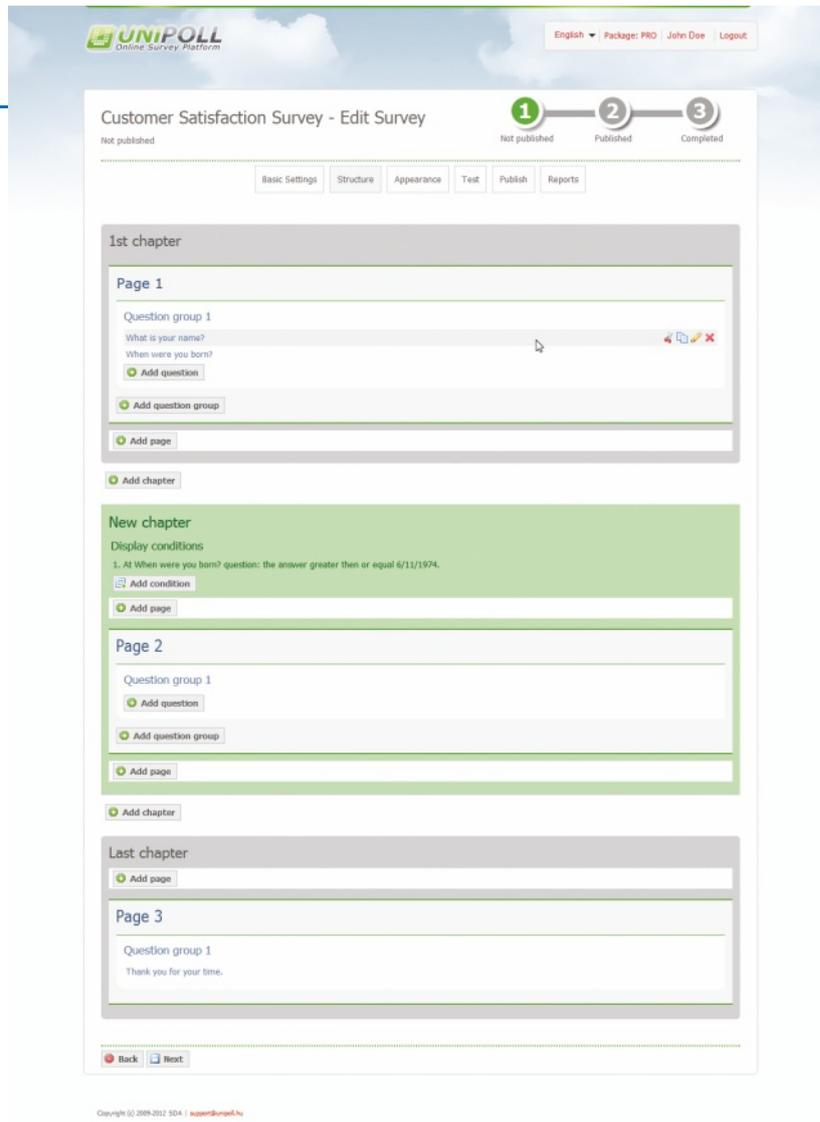
You can select from more than 15 kinds of question types to compose your questionnaire. Whether it is a simple text answer or a multiple choice question, an evaluation or complex question types, rest assured that you will find the most appropriate type of question. Do you feel that we still have missed a useful type of question? Write us about your ideas and we shall prepare the new question type!

As you wish!

By defining style sheets you can customize the look and style of our questionnaires individually. Specify a custom logo, background and buttons; adapt the institution design to your questionnaire.

Management of divergences

By using pages and chapters, we can specify display conditions for the question units that help probing the target groups more effectively. When you for example intend to measure the quality of a service you ask about the service level from only the users who replied that they used that service.



Filling in offline, general use

The UniPoll questionnaire-editor can be used with any internet browser. Even the employees who are not Neptun users can get an editing permission. All they need to access the editing interface from anywhere is a working internet connection and their browser.

Our latest development, the **UniFill** application allows us to fill in the questionnaires created in the UniPoll even without an internet connection. The responses of the thus completed questionnaire can be later imported in the UniPoll.

Evaluation, data processing

Create custom reports from your completed questionnaire! For this you only have to choose with a few clicks on the questions the answers of which you wish to see in the report. The program will automatically create graphs most appropriate to the question types and will display, in a table, the questions with the responses and with the number of answers given.

If you do not like the report or you would like to create a unique graph, this is also possible. Export the data in .xlsx format. The questions are displayed in columns, the answers in the rows (one row per respondent). With the data obtained thus you can go on with your work; you can create graphs, tables, or even a circular!

Neptun SMS

The modern, fast and efficient form of informing students is the **Neptun SMS service** of the Neptun Unified Education System.

The core of the Neptun SMS service is that the messages sent from the **Neptun.Net** system or the ones **generated automatically** in the system are immediately forwarded to the student's mobile phone in a short text message (SMS) format, so they are informed about important events without delay.

Institutional and student SMS order

In the **Neptun.Net** system the student himself can also subscribe to the SMS service, but institutions can also take this opportunity and make a configuration that the students should be informed of certain important messages via SMS. With the institutional SMS different types of events can be set (for example, that students compliant to certain conditions automatically receive an SMS message about exam result) by filtering to certain student groups (e.g. full-time students of a particular training). By ignoring the filtering conditions an SMS can easily be sent to all students of the institution.

In case of the messages sent by the institution employees it is a great aid when writing the message that an automation helps to abridge the message in a separate SMS text box aligning with the SMS's limited number of characters.

A special interface of the program helps the orientation among sent SMS messages where both the ones ordered by the institution and the forwarded messages paid by the student are listed.

The student does not need to allow the reception of institution SMS messages, since the SMS is going to land at his/her default phone number under any circumstances – this feature inevitably increases the effectiveness of institutional communication.

If the student requires

The agreement is concluded between the student and SDA Informatika Zrt., and the product support is also managed by our company. Consequently, the institution does not have to deal with the student complaints and inquiries. Our company – as in the case of Neptun – attends to the security of the information obtained in relation with the SMS service, so no unauthorized person or program can access them. The registration is free and the students are able to order the service in various packs.

The student can view the detailed and full list of message types on the Neptun web interface and he/she is able to order the service there. The types of messages he/she wants to receive an SMS of can be selected here. In case of placing an order, one SMS by message type will be sent at a time (the notification text by types and operations is contracted into one SMS), so the student does not have to worry that the message will arrive in more SMSes.

Messages by types

Beyond the so called direct messages of the instructors/administrators and students, the user can receive automatically generated messages of the most important educational and financial operations and changes with the automatic system messages. An example for the financial type of message is the tuition imposed by an administrator, or a scholarship; the educational types of messages notify of important events such as entering the grade, or a change in the exam date.

These **system messages related to studies** become prominently important for students in certain periods of the term, for example during the exam period, when the significance of how quickly the information reaches the user also intensifies. The result of this is the SMS-based information sharing which is efficient irrespective of the student's actual location or the quality of his/her telephone. The information important for the student is received even if he/she is on a skiing holiday abroad or is sunbathing on the seashore.

As in case of the automatic system messages, the informative SMSes can be extended according to the requirements of the institution.

Why the Neptun SMS service is highly recommended?

- Fastest way of forwarding messages.
- The SMS can be received with all types of mobile phones.
- The student can choose which types of messages he/she would like to receive an SMS of.
- Compact, economical form, since one message can be one SMS at most.



TimeR

Recently there has been a growing demand in higher education institutions to make the personal administration faster and spare the students from queuing up. The common interest of both parties is to avoid that many students appear in the Registrar's Office at the same time and to eliminate long queues in the overladen periods, not to mention the fact that the employees of the Registrar's Office can plan their work more efficiently.

The solution to this problem necessitated the implementation of a reservation system that allows the students to get an appointment in the education system by specifying the sort and place of the administration.

The Ramsys Informatikai Kutató, Fejlesztő és Szolgáltató Zrt. has dealt with the development of client and time management systems for already 10 years. We have integrated the timeR module – rooted in the system used by the Documents Service Centre – into [Neptun.Net](#), so that students can also experience the wait-free "adventure" of administration.

The TimeR module briefly:

- It has been developed with several years of professional experience in IT solutions, and it offers time management functions available through Neptun and a web browser.
- High level of security for building up network and program connections.
- Use of modern customer-space hardware devices (touch-screen terminals, graphic display)
- Management of different locations and administrative areas.
- Management of different permission levels.
- Central management of tasks.
- Freely editable template system to implement various functions.



Student's aspects:

- Through TimeR the student can make his/her enrollments irrespective of time and place.
- The students can see the date and time he/she previously had an appointment at, the date and time of appointments he/she presently has, and he/she automatically receives a message if any of his/her bookings has changed for some reason.
- The administration is set into a strict schedule – overlapping can be eliminated.
- With the TimeR the most appropriate time can be selected.
- Interactive communication can take place with the location of the administration in order to ensure accurate administration.

Administrator's aspects:

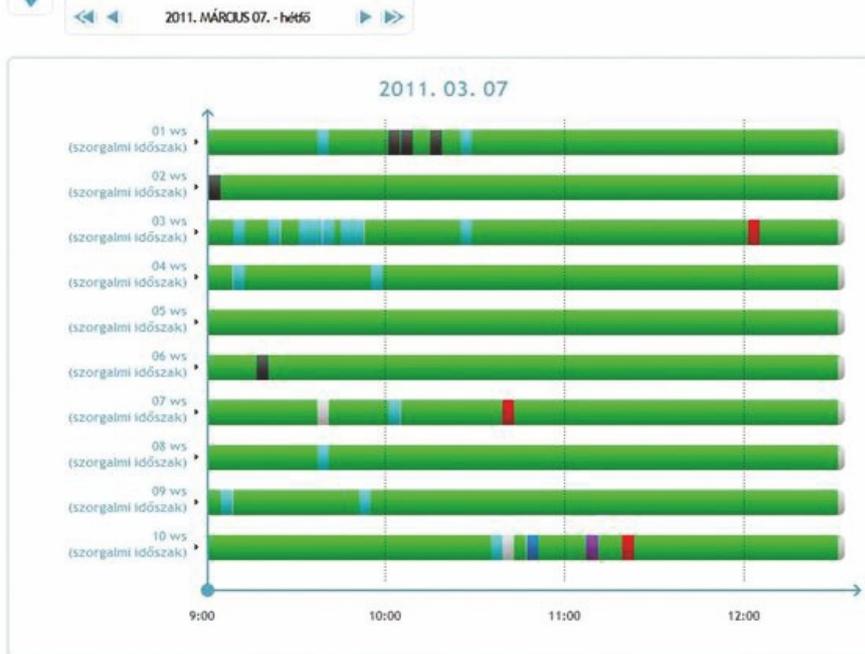
- In the TimeR client program the administrators can clearly see who has an appointment and at what time. In case of an unforeseen event, the date of appointments can be changed, deleted, which the applicants will be informed of automatically.
- The administrators can easily organise their daily work.
- Normally, the students should arrive at the booked time with the necessary preparations for the administration.
- A student who fails to appear at the appointment does not mean a loss of capacity.
- The administration break can be planned.

Director's aspects:

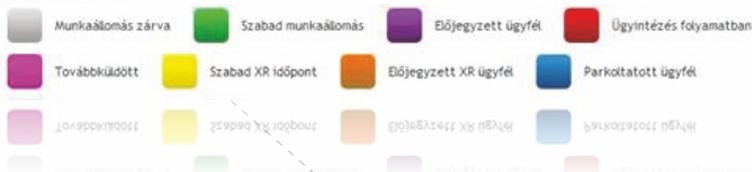
- Online monitoring is possible.
- Statistics can be generated from arbitrarily selected data.
- Sending automatic notification of events related to opening hours and time management.
- Exploration of solution suggestions.
- Supporting evaluation of achievement.

Terhelési térkép

A teljes naptár megtekintéséhez kattaljen a dátum mellett található nyílra. **Intervallum megadása**



JELMAGYARÁZAT



Preparing loading map with the Timer (in Hungarian)

V. Data supply, certificates

Our philosophy during the development of **Neptun.Net** was to exploit the advantages of the integrated electronic higher education administration in more and more fields, so we tried to incorporate a number of automatisms into the system to simplify the work of both the administrators and the students of the institutions. One of these advantages is that **Neptun.Net** is able to create various documents in preset forms from the data stored in the system, such as legal relationship certificates, certificate or invoice of paid tuitions.



The automatic production of documents listed so far is already ensured in the **Neptun.Net** system, however, the options of creating various reports or supplying data are practically infinite.

The other form of data supply is the transmission of data to be provided for the **Higher Education Information System**. Developments related to the reporting obligation comply primarily with the Hungarian law, however, upon request and after consultations they can be implemented according to the demands of other countries.

The institutions can create optional, individual templates of their own and store them in the system. Documents created in these templates can contain any data, filtered data or surveys from the data stored in the system. With this system the student's legal relationship certificate, scholarship certificates in conformity to the current rules of law can be issued, or even the subject lists of various organizational units can easily be created.

The creation of such templates outlined before, customized to the person or the institution, is very simple. Since some of the document templates are stored in the system in html format, they can be opened or modified by any external editor program or even by a text-editor. For the handling of Fast Report and Net Report type **blank templates** an integrated editor interface is available in the program.

The new blanks allow the institutions to work with customized templates on the web-based interfaces as well. Any text or even image can be inserted into the templates. The templates are stored in accordance with the organizational structure, which means that different templates can be defined by organizational units, and the created template is available also at all organizational sublevels of that unit.

Thanks to the **automatically generated reports** and documents, the administrators can save considerable time during their work.

FIR data supply module

The establishment and operation of the **Higher Education Information System** (hereinafter referred to as FIR) is regulated by the new Higher Education Act that came into force on 1 March 2006. The FIR is a nationwide system, which contains the data of the maintaining, the institution, the employment, the dormitory, the students, the instructors, and other data of the employees, in a unified form.

It is the obligation of the institutions to supply data to the system or its operator, the Educatio Social Service Nonprofit Ltd. in electronically-signed containers, and any change in the registered data must be reported within 15 days.

The **Neptun.Net** automates and simplifies the FIR data supply at the highest possible level for the institutions. In the client program separate interfaces have been created for administrators dealing with the FIR, where relevant data changes to be reported will appear in a message, and after checking these the system prepares the standard form of container automatically at the press of a button, attaches the required electronic signature and sends it to the FIR. The **Neptun.Net** processes the returned positive responses and error messages, and displays them for the administrators in the client program.



Advantages of the FIR data supply module:

- The system performs the collection of the required data and monitors of changes automatically.
- Thanks to the interfaces created specifically for this purpose the implementation of the obligations related to the FIR means the slightest extra-work for administrators.
- Institutions using **Neptun.Net** can be sure that they meet the data supply obligations in time and in the regulated form.

Student loan module

The student loan administration can be divided into two parts with regard to its process. On the one hand it is composed of the **data supply** toward the Student Loan Centre, which can be done in the program at the press of a button as the program matches the data requested by the centre with data found in the system, on the basis of which the reply message is also created by simply clicking on a button.

About the way of the matching (on what data matches the program identified the student and his/her training) a feedback message is provided at the end of the process with exact numbers, on the basis of which ambiguous items can be selected easily and be reviewed if necessary.

Another important process of student loan administration is the **grant** for which there is an increasing demand from institutions and students both, because the direct remittance is much faster and more convenient for all three parties. The whole process of the grant, except for signing the contract, can be done in the system from printing the form to the financial fulfillment. If the institution possesses an economic module, both the fulfillment of the items and the data dispatch to the finance system can be solved with only one process and one click after the remittance by the Student Loan Centre is made.

A few sentences about the student loan administration module:

- Accurate, fast, precise data supply to the Student Loan Centre.
- The whole management of the grant process can be solved within the program, from printing the form to fulfilling the items.



VI. Financial module

When **Neptun** first appeared in higher education institutions, there was only one goal: to simplify and integrate the procedures of education administration. However, in the course of years, the institutions are increasingly taking advantage of the benefits of the electronic administration, and there are more and more fields where the institutions expect modern, computer-assisted solutions from us. The other great field beside education administration, the support of which enables a high degree of automation by increasing comprehensibility and manageability of the institution procedures, is the **student-related financial issues of institutions**. As **Neptun.Net** is basically an education system, the incorporated financial modules primarily facilitate studies-related data management of finances.

In order to enable the system to perform a precise administration of any highly complicated financial structure of an institution and to elaborate up-to-date structured statements, we have created one of the greatest innovations of **Neptun.Net**, the **financial matrix**. With this, the institutions are able to follow and manage their respective finances simply, easily and with no errors.

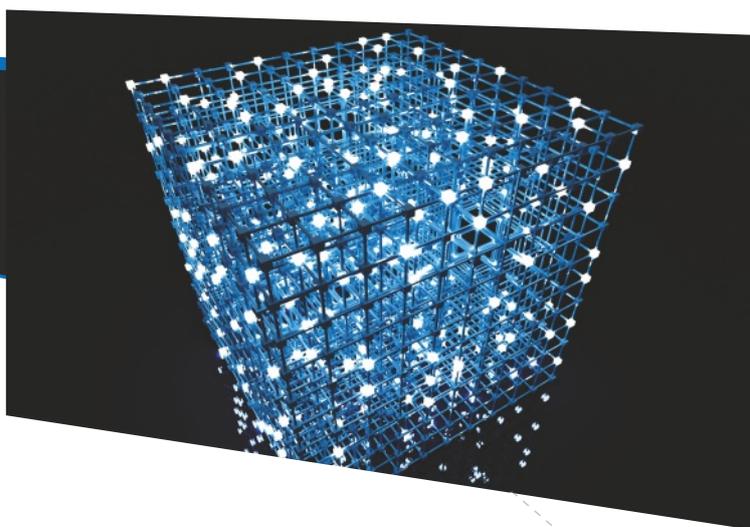
In reference to the administration of students' finances it is a key question which payment features the applied computer system can handle. During the development of **Neptun.Net**, the system has been established to be able to administrate as many methods as possible in order to enable institutions to pick from the offered options the ones that are most appropriate for them.

This information material will list the offered alternatives and give a brief analysis of each. However, it is not only one of the available payment options that the higher education institutions can select – they can use any combination of them. Accordingly, they can coordinate the system easily and simply to satisfy their own requirements.

Despite the incorporated automatism, human errors may occur in the administration of the financial operations of a higher education institution due to the high complexity and the great number of partakers (e.g.: incorrect payments). **Neptun.Net** is prepared to amend these errors as well and, as a result, to assuredly work on the basis of validated data.

Financial matrix

One of the greatest innovations of **Neptun.Net**, the financial matrix, opens a new dimension in the financial accounting of the institutions. The financial matrix enables a simple and error-free accounting of liabilities and receivables simultaneously with the preparation of automatically generated real-time statements. This is allowed by its structure where any educational and other financial accounts of any higher education institution can be stored in its full structure.



Structure of the Financial Matrix:

- Columns of financial matrix are the financial titles of the liabilities and receivables (e.g. repeat exam fee, tuition, dormitory fees, scholarships etc.)
- Rows are the certain organizational units of the organization chart, according to their hierarchy. (Institution, Centers, Faculties, Departments ("T" in the graph) etc.)
- If required, the organizational unit rows can be subdivided into trainings ("K" in the graph) belonging to the organizational unit.
- If a further subdivision is needed, training rows can further be split up to sites ("Th" in the graph) if a training is held at various sites that should be separated from a financial point of view.
- The elements of the financial matrix are the different financial codes ("PK" in the graph). Various parameters and values can be assigned to them (ledger number, job number, payment methods, certificate types etc.)
- Financial codes can be assigned to typical values of payment (e.g. in case of a repeat exam HUF500, HUF1,000 etc.) or to extra procedure fees and types (e.g. supplementary measurement: HUF500; late submission of homework: HUF1,000 etc.)

With the data organization, logical setup and groups of operations outlined here the financial data of the institution can easily and quickly be kept up-to-date. From the various financial codes groups can easily be selected to set their respective parameters (e.g. job number, VAT, possible payment methods, etc.) together.

For example it is possible to select the financial codes belonging to a financial title (colored grey in the table), and the same simplicity is offered to edit the parameters of codes belonging to an organization unit, too (marked by different colours of the encircled areas in the table). In addition, there is a possibility of free selection of financial codes (an example in the table: the boxes encircled with black) and set up an arbitrary grouping. With these groups further operations can be done, or for example their attributes can be edited together.

Pénzügyi jogcímek		IV. tan dij	Koll égi un dij	Ösz rón dij			
I n t é z m é n y	C e n t r u m	K a r	T	K	PK	PK	PK
			K	PK	PK	PK	
		K a r	T	K	PK	PK	PK
			K	PK	PK	PK	
	C e n t r u m	K a r	T	K	PK	PK	PK
			K	PK	PK	PK	
		K a r	T	K	PK	PK	PK
			K	PK	PK	PK	
	C e n t r u m	K a r	T	Th.	PK	PK	PK
			K	Th.	PK	PK	PK
		K a r	T	Th.	PK	PK	PK
			K	PK	PK	PK	
C e n t r u m	K a r	T	Th.	PK	PK	PK	
		K	Th.	PK	PK	PK	
	K a r	T	K	PK	PK	PK	
		K	PK	PK	PK		
C e n t r u m	K a r	T	K	PK	PK	PK	
		K	PK	PK	PK		
	K a r	T	K	PK	PK	PK	
		K	PK	PK	PK		

Similarly, groups of financial statements can easily be categorized and customized. Since the system includes all financial procedures of an institution in an integrated way, the statements will always be up-to-date.

Why is the financial matrix useful?

- Students can record their payments, e.g. repeat exam or service-type fees without error and mistake, consequently, they spare the employees of the institution from the related amendments.
- The system supervises even the case of the employees of the institution that they be able to add new items, only to the organizational units assigned to them.
- It makes the categorization and the configurable features of financial processes easier.
- 15 to 20 financial titles are sufficient to map and follow-up all the financial procedures of an institution.
- It saves time, energy and costs thanks to the effortless handling and integration.
- It is possible to prepare up-to-date and well-structured financial statements.

Choice of payment methods

Method of payment made by students can freely be selected from the offered options in order to meet the various expectations, requirements and agreements set by the institutions and their students. Depending on the institutional decision, the following payment methods are available in the **Neptun.Net** system:

- Collective account payment
- Virtual collective account payment
- Payment by cheque
- Credit card payment
- POS terminal
- Bank transfer
- Home banking
- Mobile payment



In order to fully serve the needs of users, **Neptun.Net** offers the institutions to use any combination of the various payment methods. The institution can regulate separately with financial codes which payment method(s) is (are) allowed.

Among the various techniques of payment there are differences in the ways of processing and automation, in the scope and extent of the incurred fees as well as in the administration requirements.

When selecting payment options, the following points can be taken into consideration:

- In case, for example, of the repeat exam fees, if payment is possible both by collective account or by credit card, it can be stipulated that only the students who already settled their repeat exam fee can register themselves for the exam (if it is required to pay the repeat exam fees for the exam). In this case, if the student has no money on the collective account, the fee can also be settled by on-line credit card payment.
- In terms of special professional training courses it might be worth allowing payment by postal cheque, because in many cases the receipt is required to be submitted for the registration. For example, if a half-blank cheque is included in the training brochures, the amount to be paid would have already been accounted by ledger number and job number in many cases before the registration of the student. Of course, after the registration of the student, the payment can be matched to the student on the basis of the cheque serial number.

Irrespective of the selected payment method, the students themselves can also establish payment items which are authorized by the institution in order to accelerate office routine work and reduce the workload of administrators. In this case, the rapidity and simplicity of their payments depends merely on the payment methods the institution makes accessible for them. In order to facilitate the selection from the payment methods, a short summary is given hereinafter about their main characteristics and the differences between them.

Payment by postal cheque

Compared to other modes, payments by postal cheque may involve additional administrative obligations to the institution depending on cheque type (blank, half-blank, Neptun cheque). During the module development we endeavoured to establish the system to allow automatic management of as many parts of the various procedures as possible.



The [Neptun.Net](#) system allows the management of cheques both printed out from the system itself and those derived from outside the system. When printing out a cheque from the Neptun, a unique 24-character identification number given by the system will be printed to the place specified by the Post Office, which serves the automatic identification of the cheque. If the institution makes a contract with the post office, the system can automatically process the cheque traffic of the institution by using the file returned by the post.

If the read-in function of postal files is not used by the institution because no such contract was concluded with the post, the system allows to record cheques into the system by the 8-character identification numbers provided by the printing house. Beside the administrators of the institutions, the students themselves can also record the cheques with the identification numbers in order to make the administration easier and automated.

Within Neptun, three kinds of cheques can be printed:

- When printing a Neptun cheque, everything will be done in the same manner as in the case of a half-blank cheque, however, the student's name and the amount are also printed, and the identification number on the cheque will be matched against the student in the database. Although in case of a Neptun cheque manual matching is not needed, in case of demand the administrators of the institution have the possibility to logically certify the payment until the postal file is uploaded into the system.
- When printing half-blank cheques, the 24-character identification number printed onto the cheque helps to identify the relevant financial code of payment operation in the system. After having the postal file loaded, the system records the paid cheque as settled with the amount included in the postal file. In this case, as the financial code is known, both ledger number and job number are consequently known — as these are fixed parameters in the financial code system —, so the transaction can be forwarded to the financial system. In order to avoid errors, even the payable amount can optionally be printed on the cheque. Half-blank cheques can be matched with the students by the administrator himself/herself before or after having the postal file uploaded, or this operation can also be done by the student himself/herself through the internet interface – in this latter case only after the postal file was uploaded. If the student would like to have the paid cheque certified before the postal file is uploaded – e.g. because the exam is imminent – this can be done only with the assistance of the institution administrator. In this case, the system considers the cheque logically certified, but this event is not forwarded by Neptun to the financial system for its financial certification until the postal file is uploaded.
- On a blank cheque only the bank account number of the institution and the unique 8-character identification number is printed. The matching of a blank cheque with the student can be carried out by the student himself/herself through the internet, or by the administrators using the postal identifier.

Advantages of payment by postal cheque:

- In **Neptun.Net**, even in case of payment by cheque there is only a minimum of office routine work to handle payment issues.
- Students can manage their payments by postal cheque through the internet.

Collective account payment

The main point of the collective account is that the institution can manage the amounts paid by all students on **one joint account**, furthermore it can be followed and easily managed which students have access to what amounts.

Upon requests from the institutions, in **Neptun.Net** we have enhanced the functionalities of the collective account so as to **allow institutes to use now an indefinite number of collective accounts**. The students can belong to any (one or more) of them.

Main features of the new collective account:

- The system has considerably been renewed and extended logically in the identification of remittances:
 - If the Reference Box is correct, the amount is now automatically redited to the student
 - If the Reference Box cannot be construed, but:
 - there was only one user so far who initiated remittances from the sending bank account number, the system will automatically match the given item with the student.
 - the sending bank account number is identical with a student's bank account number, the system will automatically match the given item with the student.
- The system is now fully transformed to be transaction-based. As a result, stuck external and internal dependent transfers can be revoked.
- If there is a transfer incoming from a student who does not yet belong to the given collective account but can be identified by the system, the program will automatically add the student to the collective account and credit his/her payment for him/her.
- The transferability status of internal dependent items can freely be set, even in groups. This can be useful e.g., if the treasury is closed, but repayments to students should be transferred.

Advantages of collective account payment:

- It is very cost-efficient from the aspect of the institution.
- The procedure is almost completely automated.

Virtual Collective Account

In order to reduce the lead-time and the emerging costs of collective account payments for institutions and to make the management of overpayment characteristic of other types of payment methods entirely automatic, we have developed the **virtual collective account**, which allows the students to **transfer money directly to the treasury account** without the contribution of commercial banks.

The students only have to enter their Neptun code in the reference box of the remittance order by which the financial system can identify these types of transfers and can book them to a special ledger number (this itself is the virtual collective account).

The use of the virtual collective account requires a high-level cooperation between the [Neptun.Net](#) and the financial system used in the institution, which due to the standardized XML-based communication **can be configured with any kind of financial system**.

The amounts transferred by students arrive directly to the treasury account of the institution. Then the financial system passes the relevant data to the [Neptun.Net](#), which identifies the payer on the basis of the reference box and keeps a record of the balance of the student. After this when the student initiates a payment the [Neptun.Net](#) dispatches the information to the financial system to what ledger number from the special ledger number the amount in question should be booked over.

The usage of the **virtual collective account** for students and administrators fully corresponds to the normal collective account.

Advantages of virtual collective account:

- Reduces the lead-time of payments.
- Transactions do not entail any costs for the institution.
- Highly automates the error correction of overpayments and incorrectly launched payments.



Payment by credit card

When this payment mode is selected, the student can choose which recorded items he/she wants to pay, then, after the selection of credit card payment, the system calculates the total of the payments and communicate the data of the expected transaction to OTP Bank through a safe background channel. The system opens a new internet browser for the student and navigates him/her to the corresponding page of OTP, where the amount and the target bank account number (treasury) are already filled in and the student is not able to modify them.

The student enters his/her credit card data on the **OTP site** booted in on his/her computer and sends the order. Following the successful transaction, the OTP server sends confirmation to the system through a safe background channel, and then **Neptun.Net** confirms the successful transaction to the student. Later on the bank will send an analytic file of successful transactions together with the itemized commissions. Naturally, this sort of payment can be done with any (not only OTP) credit card that is suitable for online payment. When the analytic file is uploaded into the system, the data processing takes place. The commissions for each transaction will be recorded as fulfilled items by **Neptun.Net** system, so the commissions will be forwarded to the financial system in a breakdown by financial codes.

Advantages of payment by credit card:

- This is the most convenient and quickest method of payment for students.
- For the institution this solution entails only a minimum of administrative tasks.
- In the **Neptun.Net** system, the payment operations will be automatically and instantaneously confirmed (online transaction).
- This service can be used with any (not only OTP) credit card, but the students have to conclude a contract with their respective bank on allowing internet payment options with their cards.
- In case of credit card payment, one transaction can fulfill more recorded payment orders at the same time.



POS terminal

The concept of the "POS terminal" payment option is the same as that of the payment in for example a department store with our credit card. In the customer service centre or the Registrar's Office equipped with such terminal the administrator selects the item or items that the student would like to settle, then, as at a retail purchase, the administrator reads the card and the student enters the pin code. The **Neptun.Net** is notified of the purchase by the bank, and the student's due item becomes immediately fulfilled.

Advantages:

- Combined administration and payment.
- The fulfillment takes place immediately.
- It can be used with any credit card regardless of bank or type.

Mobile payment

The payment method of **Neptun.Net** developed the latest is mobile payment. It means that the student does not even need a computer or internet connection to settle his/her debt recorded in the education system. With a specific bank account and phone number and by the cooperation between the education system, the telephone service and the bank, the student is able to arrange his/her due item to the extent of his available balance with an operation on his/her cell phone. The process is automated for the institution.

The benefits of mobile payment:

- Due to automation the process requires little administration for the institution.
- The student can settle his/her debt with his/her mobile phone anywhere and at any time.

Electronic invoice

As far as we know only a small number of the institutions comply with their obligation to issue invoices. As a result, we had to develop a solution by which **the institutions can issue a huge number of invoices automatically, in full scale, with minimal administration and high cost efficiency.**

With this solution the sending of invoices to students is also ensured, as they can be downloaded from the Students' Web.

By using the module, **an electronic invoice of any payment can simply be issued, and the paper-based invoices can easily be archived electronically.** For the financial codes it can be set, whether an invoice can be issued about the payment or not. If the invoice is electronic or electronically archived, the student can download his/her invoices from the internet, in which case there is no limitation of copies: any number of electronic copies can be created of the invoices recorded in the system.

Automatic invoicing

The latest functionality of **Neptun.Net** means further facilities for the administrators and students both: **an electronic invoice of each payment is prepared automatically in the system.**

In the past students had to inform the administrator in person, or through the appropriate interface of **Neptun.Net** that they would like to have an invoice of a particular payment, and administrators had to accept this one by one; with this functionality this process is eliminated. The students only have to decide which payment they want to have a cash invoice of and which a transfer invoice of. The frequency and timing of invoice generation can be configured according to the demands of the institution.

Advantages of automatic invoicing:

- It further reduces the administration of invoicing.
- It guarantees that all payments are accounted in accordance with the law.
- The students do not need to hand in a claim for an invoice.

Afterword

We sincerely hope that while reading through this material you have found lots of solutions that raised some ideas how to make life and administration easier at your institution. Should you have further questions about our products, do not hesitate to contact us: we will be happy to help you.

Please contact us at:

E-mail: info@sdainformatika.hu
Internet: www.sdainformatika.hu
Phone: (36) 1 209 4748
Product portal: www.neptun.org.hu

Best regards, [The team of SDA Informatika](#)



