

Automation of Dean's Office Functions in a Higher Education Institution on the Basis of Electronic Document Flow System

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The article contains the description of automation function technologies realized in the work of a dean's office. The main functions realized by a dean's office in the course of its activity are shown in the article; the main functions realization in the system of electronic document flow "1C University" is presented. The application of electronic document flow systems promotes the improvement of quality and efficiency of a dean's office work due to the decrease in time spent on the processes of collecting, processing and obtaining required information; allows to carry out dean's office functions at a more technological level, simplifying the procedure of processing the data used in the course of educational process, automating the formation and preparation of necessary documents (test and examination papers, certificates of training, orders, etc.) for printing.

Keywords: higher education institution, dean's office, management, automation system

INTRODUCTION

The dean's office carries out organizational, performing, administrative and other functions, arranging the activity on the basis of the Federal law of the Russian Federation of December 29, 2012 No. 27E-FZ "About education in the Russian Federation", The order of the Ministry of Education and Science of the Russian Federation "About the statement of the Order of the organization and implementation of educational activities for educational programs of the higher education – to programs of a bachelor degree, programs of a specialist programme, programs of a magistracy", 2013, additions and amendments to them, the Charter of

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a higher education institution and other regulations.

As for the direct organization of educational activity, the dean's office runs the educational process at a faculty; carries out planning and direct management of educational, methodical, and research work at a faculty; along with chairs of a faculty develops and implements curricula and programs, individual plans and training schedules for certain students; keeps record of student contingent studying at a faculty and their educational progress; monitors students' educational and production practices; draws up a schedule of studies and supervises its execution; keeps in check examinations and tests process, coordinates the work of faculty with the work of other divisions in a higher education institution; arranges the work of commissions to issue scholarships of all types in compliance with the regulation documents; supervises graduate students' training and staff members work aimed to improve their professional development; provides office-work and document flow at a faculty, etc. (Zeleyeva & Mehdi Vahedi 2012; Aflyatunov, 2014; Ragulina, 2004; Tikhomirova, 2013; Yarema & Muslov, 2008; Sharifzyanova, Shtreter & Nauryzbayeva, 2015).

The work of an innovative higher education institution in the context of specialists' training quality improvement sets new tasks for dean's offices work advancement, including their work automation, in particular, due to the development of information exchange (Safonov, 2013; Vlasova, Kirilova & Masalimova, 2015). The dean's office of a modern educational institution has to represent an open system the components of which constantly interact with each other and with the elements of other divisions (Aflyatunov, 2014; Latukh & Pushkaryov, 2012). This system has to become the link providing multilevel system of collecting and accounting of information on all students of a faculty, creation of the unified information space providing effective exchange of information between all divisions of a faculty and higher education institution.

When it came to the selection of such system the preference was given to electronic document flow systems (EDFS) (Uvarov, 2009). The analysis of their opportunities showed that they most fully correspond to the dean's office functions stated above.

The electronic document flow system (EDFS) is a computer program (the software, system) which allows to arrange the work with electronic documents (creation, change, search) and interaction between employees (a document transfer, delivery of tasks, sending notices, etc.) (Glushchenko, 2011; Hodak, 2009; Kadnikova, 2014; Kulikova, 2013; Kuznetsov, 2014; Kuznetsov, 2015; Ovchinnikov, 2014). Also EDFS is called EDMS (Electronic Document Management Systems). It is possible to study the review of EDFS, for example, in (Glinskikh, 2001; Kolesov, 2009).

Let us note that today modern EDFS tends to transit to the ECM type – Enterprise Content Management – "management of corporate information resources (the content, filling)". This concept is slightly broader than EDFS. ECM implies a set of technologies, tools and methods used to collect, manage, accumulate, store and deliver information (content) to all consumers in the organization (Dyachenko, 2012; Dyachenko, 2013).

MATERIALS AND METHODS

The configuration "1C: University" (<http://solutions.1c.ru/catalog/university>) was chosen at the state educational institution of higher professional education "Mordovian state pedagogical institute named after M. E. Evseviev" to solve the task of dean's office functions automation (Merkuryeva, 2012). It refers to EDFS though it possesses ECM features. The configuration "1C: University" is one of the effective means of dean's office organizational and administrative activity automation. Its

application reduces significantly the time of access to data, excludes duplication and facilitates the drawing up of reporting, main documents (orders, instructions, office memos, etc.), statistical data processing, formation of staff members' academic load, monitoring of progress and attendance, work with curricula, formation of documents of the state-approved format on the higher education, the notification of staff, employees and students on the basis of notification subsystem application, automatic selection of vacancies for graduates, etc.

There was applied the method of modeling to research the opportunities of the specified configuration. It presented the management automation in the form of a purposeful and organized process aimed to implement dean's office functions. There was specified the subject domain, operating and operated objects, direction of flows of the operating information, etc. All this was realized in the form of a computer model created with the application of the configuration "1C: University".

RESULTS

The application of "1C: University" in the dean's office activity showed that it may provide the automation of the following dean's office functions.

1) Obtaining information on students (personal data, academic progress, etc.)

For this purpose, it is required to select the report "Student's personal card" in the section "Students' structure management" (Figure 1).

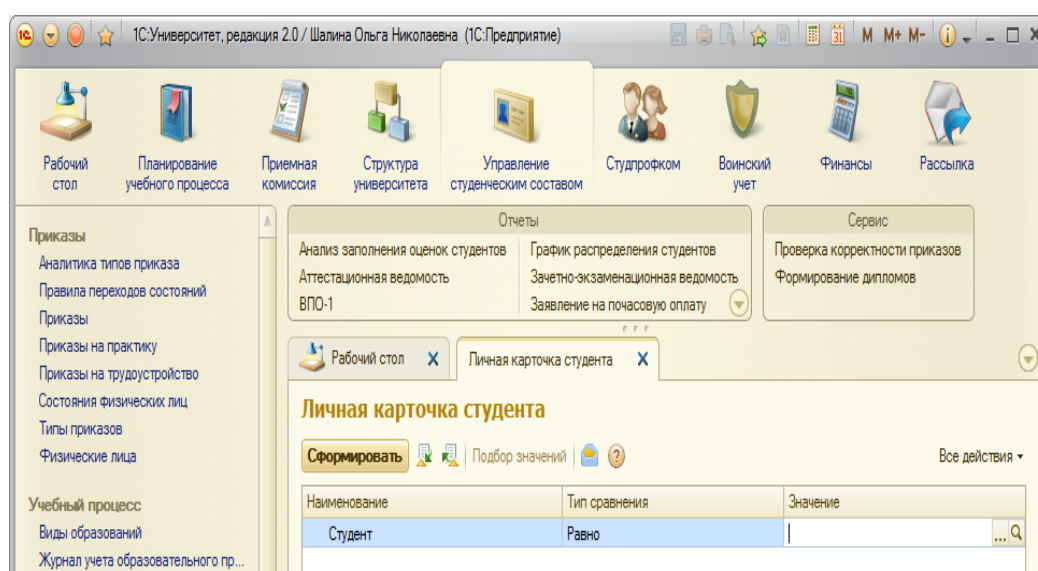


Figure 1. Filling in the report "Student's personal card"

To form this report it is necessary to specify the student's full name (the datum is selected in the form of "Natural person" and other parameters of selection if there is need. The system allows to save the current parameters of the report for further fast access to them, and also to load the last kept report parameters. After pressing the button "Create" the printed form of the report representing a student's personal card will be formed; it is presented in Figure 2.

ЛИЧНАЯ КАРТОЧКА СТУДЕНТА
 ФГБОУ ВПО "Мордовский государственный педагогический институт им. М.Е. Евсевьева"
 дневное отделение
 Уч. год. 2014 - 2015

Факультет Физико-математический факультет
 Специальность Направление подготовки 050100 Педагогическое образование профиль Математика. Информатика

Фамилия Суталина Имя Елена Отчество Александровна

1. Пол	Женский	8. Сведения о родителях
2. Год и месяц рождения	1994.02	отец (возраст, кем и где работает, место жительства, телефон)
3. Место рождения	Мордовия, г.Саранск, ул. Р.П.	мать (возраст, кем и где работает, место жительства, телефон)
4. Национальность		
5. Образование (какое учебное заведение окончил, когда и где)	МОУ "Средняя общеобразовательная школа № 33" г.о. Саранск РМ. 2.012	9. Домашний адрес а) до поступления в ВУЗ, телефон
6. Выполняемая работа до поступления в учебное заведение (где и в качестве кого)		б) прописка в настоящее время
7. Семейное положение (холос, женат, наличие детей), место жительства жены (мужа), Ф.И.О. до изменения фамилии	Не замужем	Дата заполнения " 11.06.2015 г. Личная подпись

Регистрация прохождения учебы			
Курс	Наименование факультета	Дата и № приказа о зачислении и переводе на следующий курс	Для отметок
1	Физико-математический факультет	05.08.2012 № 000001750	
2	Физико-математический факультет	16.07.2013 № 000001740	
3	Физико-математический факультет	29.07.2014 № 000003244	
4			

Figure 2. Report "Student's personal card"

Having selected the section "Natural person" it is possible to carry out the correction of personal information (for example, changing of a surname).

2) Formation and preparation of administrative documents, certificates of training for printing.

The main administrative document of any organization is the order. As for the type and purpose orders may regulate practically any aspect of higher education institution activity and, therefore, are used in all structural divisions. In the configuration "1C: University" internal administrative documents of higher education institution are formed by means of the document "Orders". The body of types of orders which may be used in a higher educational institution is set at the first start of the configuration "1C: University" on the form "Master of initial data input" (tab card "Types of orders").

Then the access to types of orders and their editing is realized by means of the reference book "Types of orders", presented in Figure 3; the access to it is provided on the panel of navigation of the section "Students' structure management".

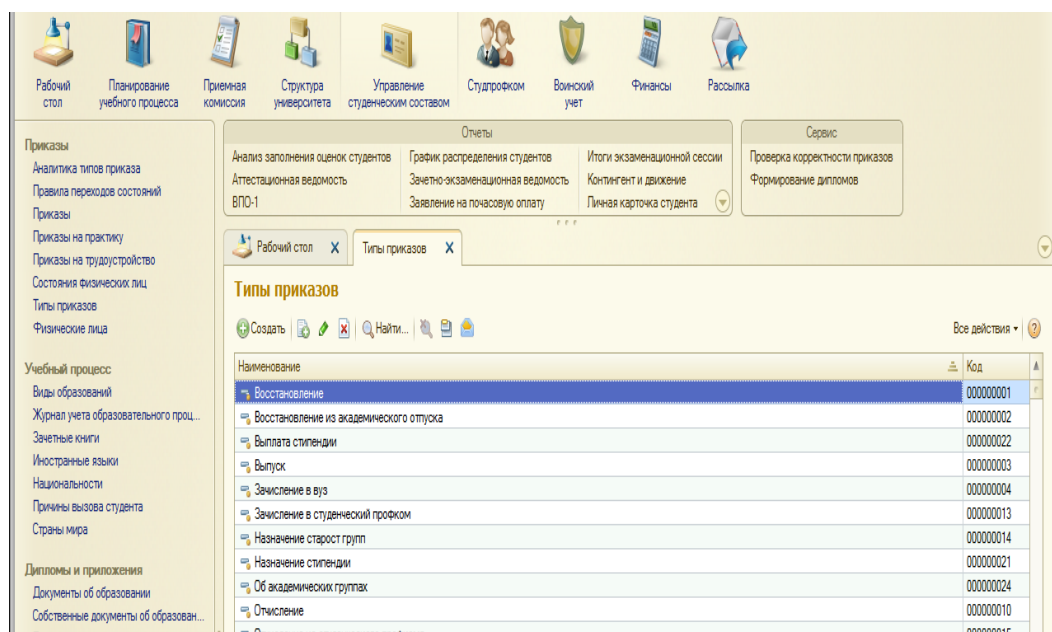


Figure 3. Reference book "Types of orders"

To learn the structure of the type of the order, it is required to open any type from the form of the reference book list "Types of orders", for example, "Reinstatement", and in the field "Name" the name of the type of the order should be specified. The form of the reference book "Types of Orders" includes three tabs: "Printing form", "Control of parameters" and "In addition". On the tab card "Printing form" in the fields "Order heading" and "Heading of the order group" the rule of formation of order heading and heading of group of the order of this type (for printing forms of orders) are set. In the tab part of the form below there are stated the fields of the nominal list that are output in the corresponding group of orders. Names of all parameters of the order created about student's status change (Natural person, Starting date, Course/Year, etc.) and corresponding to these parameters rules concerning the variation of their meaning are specified in the "Control of parameters" tab in the field "Document parameters". The names of all parameters to create the group of orders about the natural people status and rules concerning the variation of their meaning are specified in the field "Parameters of group" (Figure 4).

Documents on the basis of which the order is formed may be added in the tab card "In addition". If necessary, it is easy to introduce changes into the reference book "Types of orders" (for example, to add a new type of the order). Besides, in the reference book "Types of orders" it is possible to create text formulations that allow to leave a blank field for entering any text into it when creating an order.

Let us note that the form of the list of the document "Orders" allows not only to select necessary documents from the list, but also to carry out orders filtration according to the year or date (with the indication of the period) when the order was created, and according to the type of the order, etc. It is possible to create orders of various types in one document "Order" at the same time. Besides, during the work with orders one can create printing forms of abstracts from orders. The window "Data filter" and the window "Editing of selection" are shown in Figure 5 and in Figure 6 respectively.

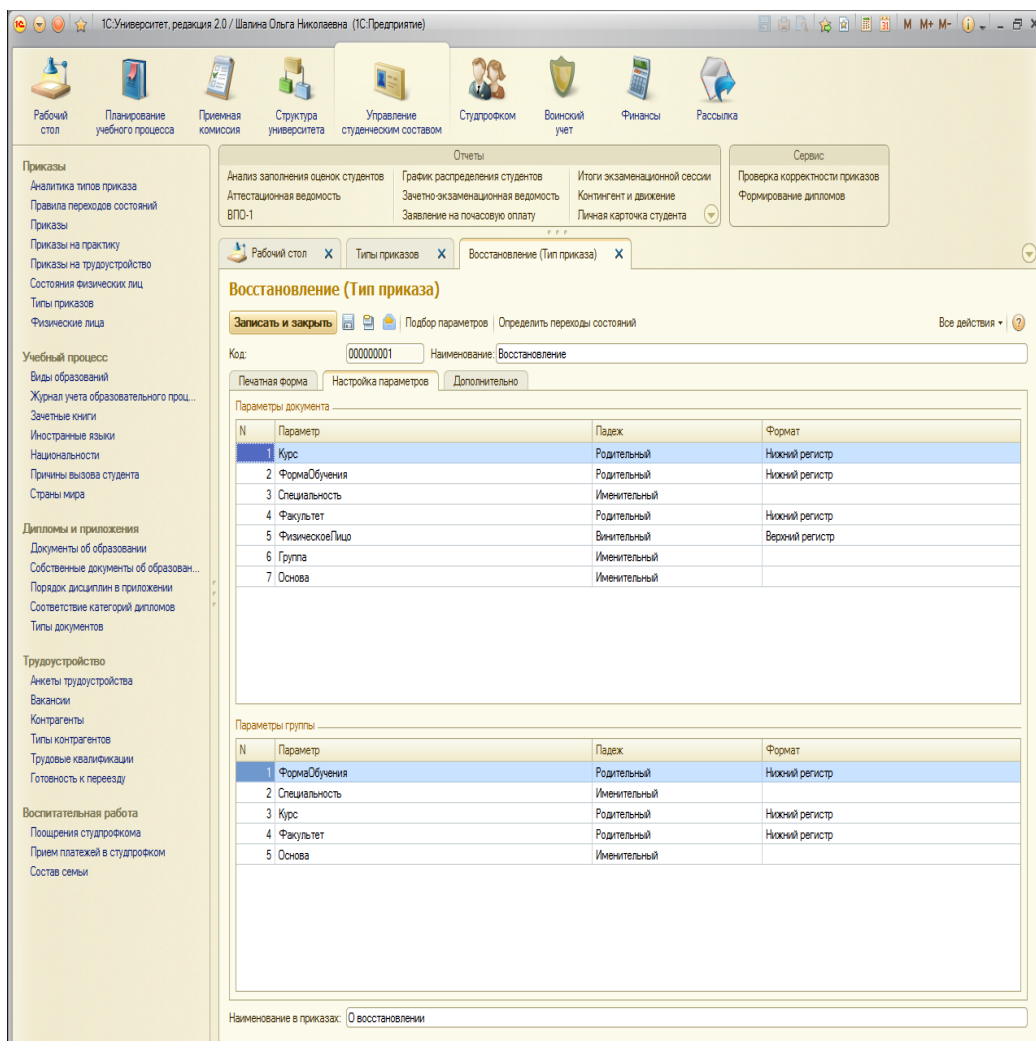


Figure 4. Setting of parameters to view documents

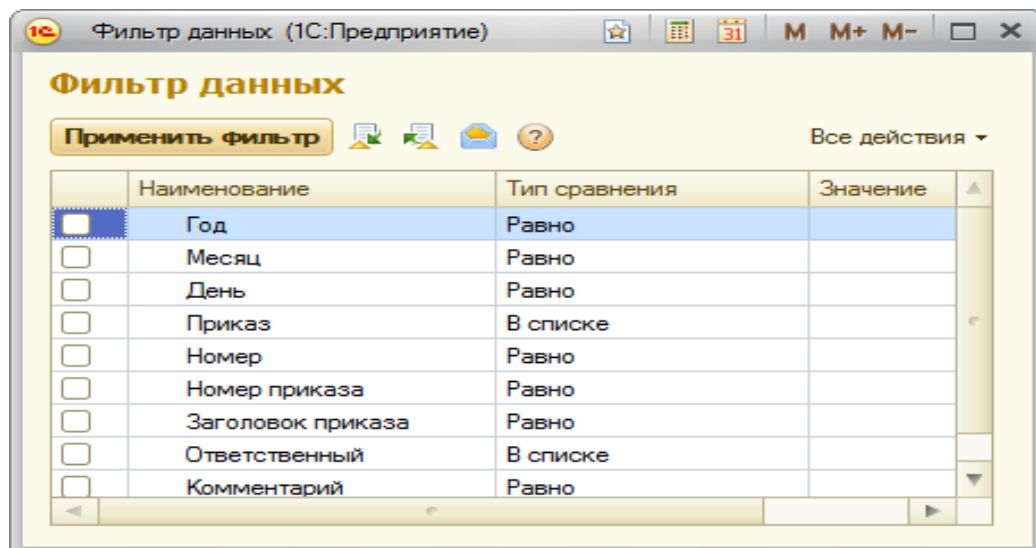


Figure 5. Window "Data filter"

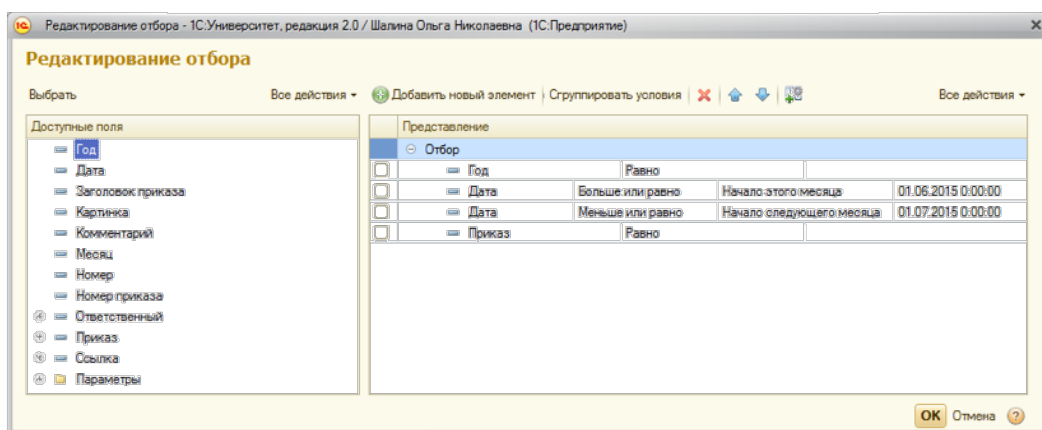


Figure 6. Window "Editing of selection"

It is worth noting that a large number of orders concerning natural persons (orders of transfer, assignment, transfer to another form of education, etc.) are formed in a higher educational institution. As the volume of the processed data in the subsystem of orders formation is enormous there may be such mistakes as incorrectness of orders and violation of logical sequences between orders (e.g. transfer of an expelled student to the category "debtor"). For timely identification and correction of such mistakes in the system of orders formation there is provided the check of orders correctness. The access to orders correctness processing is provided by means of the menu "Service" on the panel of actions of "Admission committee" and "Student's structure management" sections. As a result, in the left part of the form there will be displayed the list of persons (with the indication of the numbers of their academic record books) in respect of whom logical sequences between orders were broken, and, therefore, some parts of orders are incorrect. To make the search of the line where information on correct orders is displayed easier and simpler it is marked in green, lines with incorrect orders are marked in red. By means of the button "Selection" it is possible to create any list of natural persons that need to check the correctness of orders.

The configuration contains the report "Information of dean's office" to form certificates for students of the faculty (Figure 7).

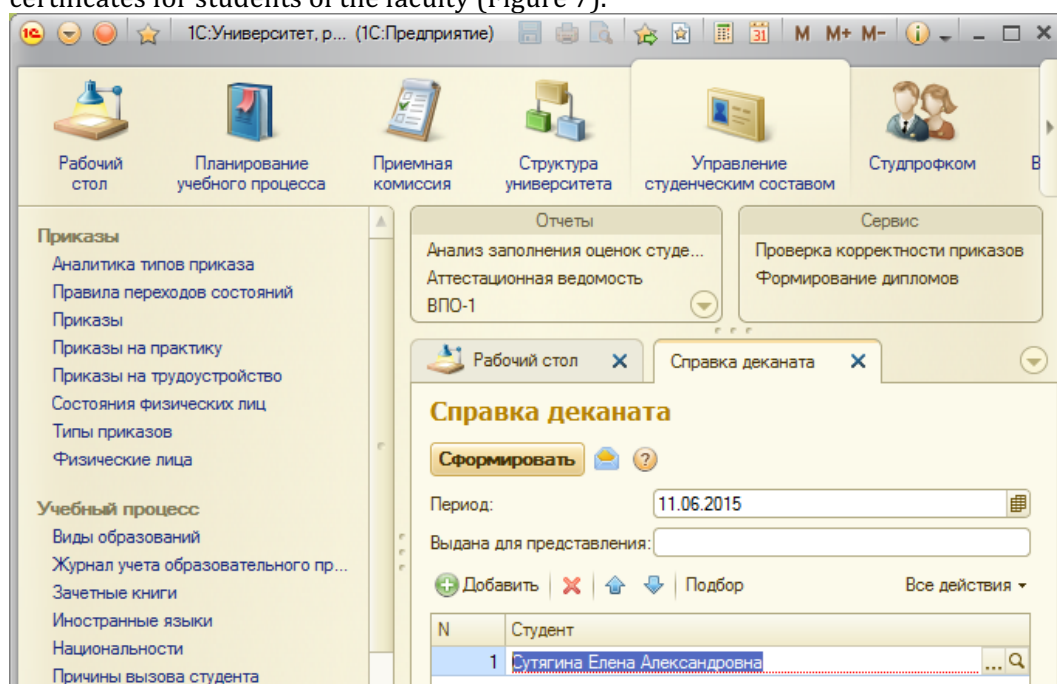


Figure 7. The report "Information of dean's office"

The result of the report "Information of dean's office" implementation is shown in Figure 8.

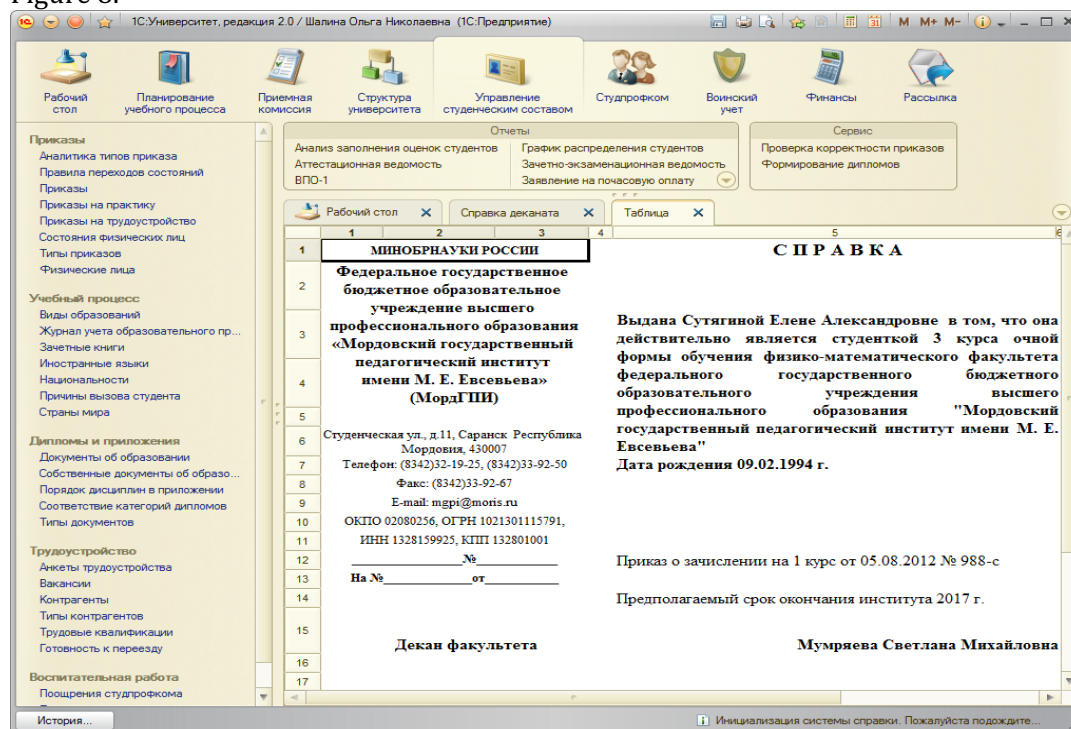


Figure 8. The created certificate

3) Automation of the contingent list.

So, for example, the report "Data on the contingent enrollment" (Figure 9) is intended to display the information on the contingent enrollment.

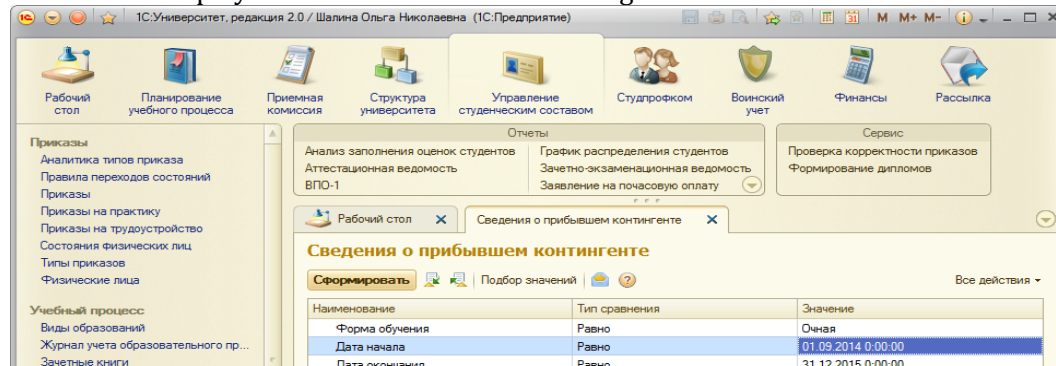


Figure 9. Report "Data on the contingent enrollment"

At the creation of the report parameters it is necessary to specify the form of education for which the report is formed (the value is selected from the reference book "Form of education", and also starting dates and expiry dates for which the report is formed. By means of the button "Selection of values" it is possible to select necessary parameters from a tree of values on the form of value parameters selection. Let us consider the assignment of some reports.

The report "Data on the contingent enrollment according to the surnames" is intended to display detailed information on the contingent enrollment.

The report "Statistics of the students' contingent" is intended to provide statistical information on the contingent of students studying at the faculty. To create the report parameters it is necessary to specify the date of the report formation, the form of education for which the report is formed (the value is selected according to the reference book "Form of education") and the reason of enrollment (the value is

selected according to the reference book "Reason for enrollment").

The report "List of students" is intended to form lists of students' groups and graduates.

The creation of the corresponding printing form for each report is provided. Any unspecified lists of students are similarly formed (e.g., the list of students trained on a commercial basis, the list of students having academic debts, the list of 21-year old and older students, the list of students with children, etc.).

4) The automation of report documents preparation according to session results and repeat examinations (test and examination sheets, summary data on session results, etc.)

The following reports are provided to perform this function.

The report "Test and examination grade report" is intended to form reports in which the results of students' educational activity according to the results of tests and examinations are reflected.

The report "Data of test results" is intended to provide the information on the number of students' tests results at the end of the term.

The report "Data on examinations results" is intended to provide the summary statistical information on the examination results.

The report "Data on the session performance" is intended to display the information on the performance of the session and intermediate examination results.

The report "Examinations results" is intended to provide statistical information on examination results. Detailed statistical information on grades received by students during the session is displayed in the report.

5) Automation of students' individual progress control process.

The control over individual progress helps to monitor educational and upbringing activity. In a higher education institution the complex of control types is used: certifications, term papers, reports on the results of different types of practices, tests, examinations, etc. The results of each type of control have to be documented and ordered for further work with this information.

To monitor the individual progress the corresponding subsystem of individual progress control intended for storage and analysis of students' progress is realized in "1C: University". This subsystem application allows to control the results of certifications, examinations, final state certifications, implementation of term papers, etc.

The documents "Control conditions", "Assessment report", "Attendance" and a number of reports make a part of the individual progress control subsystem. The document "Control conditions" contains information on the rules of progress control. The access to this document is provided on the navigation panel in the section "Planning of educational process". Types of control have to be situated in such a way as to provide the transition from one successful type of control results to the next one. For example, if it is necessary to pass the certification successfully to sit for an examination.

One of the forms of students' individual progress control is certification implementation for which grade reports are created, and test-examinations sessions for which the corresponding statements are created as well. The document "Assessment report" is used for the specified purposes in "1C: University". To create a new document it is necessary to press "Create" on the form of the list of educational process log-book and select the type of the document "Assessment report" in the opened form. To form the document in the correct way it is necessary to set the date so that it should enter time frames of the semester.

It should be noted that the information from the documents "Assessment report" and "Attendance" is used not only for progress control and students' attendance, but for the accounting of teachers' performed work loading (in the field "Teacher" of both documents there is specified the full name of the teacher who conducted classes).

These data can be used to calculate salary in "1C: Salary and human resource management". To realize this function "1C: University" provides the possibility to import the data to the configurations "1C: Salary and human resource management" and 1C: "Salary and personnel resources of the budgetary institution".

On the basis of students' individual progress data the following reports can be made: "Assessment report"; "The list of persons not admitted to certification"; "Average values of certifications results"; "Data on test results"; "Student's progress".

The report "Assessment report" is intended to display the information on certifications results obtained within educational process.

The report "The list of persons not admitted to certification" is intended to display the information on the students who are not admitted to certification in the discipline according to the results of a certain period of control.

The report "Average values of certifications results" is intended to provide the information on average values of progress according to the results of one or several types of control.

The report "Student's progress" is intended to provide the information on student's progress throughout the entire period of training.

6) Automation of individual record-keeping of students' attendance.

The document "Attendance" displays the information on students' training sessions attendance of each discipline within a certain period of control. The access to the specified document is provided through an educational process log-book the reference to which is located on the navigation panel in the section "Students' structure management".

7) Automation of processes connected with students' job-training practices of different types.

Students' job-training practice is a component of the general educational program of a higher education and consists in students' vocational and practical training. The goals and volume of practice are defined by the federal state educational standards of the higher education. The function of job-training practice control is realized in the configuration "1C: University". The document "Job-training practice orders" is the main document of the control subsystem for conducting students' practices. Besides, some other reports are realized in this subsystem.

The document "Job-training practice orders" allows to plan and set parameters of students' practice. The access to the document "Job-training practice orders" is displayed on the navigation panel in the section "Students' structure management". It should be noted that in the document "Job-training practice orders" the function of group filling of fields is realized (e.g., if several students have practice in the same place, or the same position, or under the supervision of one and the same teacher).

On the basis of the documents "Curriculum" and "Job-training practice orders" there may be created the following reports: "Schedule of students' distribution"; "Data on terms of job-training practice".

The report "Schedule of students' distribution" contains detailed information on students' distribution for job-training practice.

The report "Data on terms of job-training practice" is formed on the basis of the document "Curriculum" and gives the information on job-training practice in different educational groups.

8) Preparation of electronic and printing forms of diplomas and annexes to them.

The diploma is an official document about the graduation from a higher or specialized secondary educational institution, award of an academic degree or an academic status.

Diploma supplement includes:

- the list of the studied disciplines with final grades and total of academic hours;
- the list of job-training practices with total grades and the spent time (in terms

of weeks);

- the list of final state exams with grades;
- the name of a final qualification work with the grade.

Diplomas, diploma supplements are formed on the basis of students' curriculum performance data (progress, subjects of term papers and diploma, the job-training practice period, etc.). "1C: University" contains data on obtaining diplomas of the higher education in the current academic year, and for previous academic years as well.

The diploma of higher education is issued to a university graduate who passed the final state certification in accordance with the established procedure. The basis for issue of the diploma is the decision of the state examination board. To improve the quality of processes connected with the formation of printing forms of diplomas and diploma supplements there has been worked out the subsystem of diplomas and diploma supplements formation which allows to create the above documents on the basis of data on students' progress during the entire period of their training and implementation of the curriculum in "1C: University". Thus the formats of output documents (including the filled text fields) completely correspond to the formats of forms of the established template.

The work with the subsystem of diplomas and diploma supplements formation supposes the use of such documents as "Compliance with diploma categories", "Order of disciplines in the diploma supplements", "Diploma", processing of "Diploma formation", and reports "Data on the issued diplomas" and "The list of diplomas for unloading".

The document "Compliance with diploma categories" provides the access to the information on various categories of diplomas and types of control corresponding to them, and the possibility to edit this information. Diploma categories are: disciplines, term papers, job-training practices, state exams, elective courses, etc. Types of control are: tests, a term paper, etc. The type of control is selected from the reference book "Types of control".

The access to the document "Compliance with diploma categories" is carried out on the navigation panel in the section "Students' structure management".

In the diploma supplements the disciplines are displayed in a specific order. The information on the order of disciplines in the diploma supplements is kept in the corresponding standard documentation. The order of disciplines in the diploma supplements will correspond to the order defined in this document. For each level of students' training (specialist, expert, bachelor, master) a certain order of disciplines is set. Thus, the total number of the documents "Order of disciplines in the diploma supplements" should not exceed the total number of training levels according to which students' training in a higher education institution is implemented. The access to the document "Order of disciplines in the diploma supplements" is provided on the navigation panel in the section "Students' structure management".

The creation of printing forms of the following documents: diploma, diploma supplements, duplicate of the diploma, duplicate of the diploma supplements, etc. is carried out by means of the document "Diploma". In case when there is not enough place for the list of disciplines on the back of the diploma supplements, the button "To transfer disciplines" is used. This button is available when printing forms of diploma supplements are created. Data on diplomas are kept in the reports "Data on the issued diplomas" and "The list of diplomas for unloading".

The report "Data on the issued diplomas" provides the list of diplomas issued to graduates.

The report "The list of diplomas for unloading" is for the official use only; the information from this report is further used by the specialized software. The created report is kept in the format "txt" or "csv" for the subsequent work with the data collection module.

9) Automation of educational process planning.

The curriculum defines the structure of the academic subjects studied within the frames of each training profile at the institute. According to the curriculum the disciplines are distributed over the entire period of studies. The time (in academic hours) and the quantity of test units for each subject are taken into account; it should not exceed the limits set by educational and methodical documents and normative legal acts, first of all, by Federal state educational standards. The majority of disciplines, except some specific (e.g., various laboratory practical works that assume the performance of laboratory studies, physical education, etc.) include lectures and practical training sessions, students' independent work when studying the discipline; forms of control are specified (test, examination, graded test, etc.)

As a rule, three types of curricula are used: basic (perspective) curricula, curricula and individual curricula for the successful educational process planning. The basic curriculum defines an educational program for the entire period of training, general parameters of educational process organization for a bachelor degree profile (the list of disciplines, number of educational weeks, a ratio of classroom and out-of-class academic hours, etc.) and serves to determine the content and labor input of student's study.

The curriculum is necessary to develop the annual schedule of educational process and calculation of labor input of teachers' work. All kinds of student's activity to master an educational program, test units (credits) of each type of activity, the status of disciplines in the curriculum, quantity of classroom and out-of-class academic hours and hours of independent work. The student's individual plan defines his/her individual educational program of training for one or several semesters.

10) Automation of planning and accounting of teachers' staff loading performance: planning of loading at chairs; distribution of loading among teachers' staff of chairs; adjustment of loading calculations parameters according to the requirements of higher education institution (integration with programs of a personnel record "1C: Salary and human resource management", "Salary and personnel of the budgetary institution"; accounting of academic staff loading performance; providing of relevant reporting.

There is a special subsystem in "1C: University" which is responsible for the formation of the rules for teachers' staff loading calculation, planning of distribution of loading for chairs, distribution of loading among teachers' staff, the accounting of working hours of teachers: the accounting of loading and time to conduct lessons, etc. The following documents "Contingent formation", "Distribution of errands", "Chair assignments", "Plan of the assigned personnel structure of the chair", etc. are a part of this subsystem. The document "Contingent formation" allows to obtain detailed information on the students' contingent for the current academic year, and to unite and divide the contingent. The document "Distribution of errands" is intended to fix a certain number of academic hours for teachers' loading.

The creation of the document "Distribution of errands" supposes, first of all, to specify the academic year (the year is selected from the reference book "Academic years") and the name of the structural division (the selection is made on the basis of the document "Formation of the university structure". Then it is necessary to press the button "To update data" to fill in the document; the button "To update data" provides the refilling of the document in case there should be entered some changes into the document "Contingent formation". The filling of the document "Distribution of errands" occurs on the basis of the following documents "Contingent formation" and "Chair assignments". The form of the document "Distribution of errands" includes tabs "Main loading" and "Additional loading".

The distribution of the main loading is made in the tab card "Main loading". This tab is divided into the areas "Calculation of academic hours" and "Data on the

distribution". The list of disciplines performed by the teachers' staff of the chair in the specified academic year according to the curricula is kept in the area "Calculation of academic hours". All fields of this tabular part, except the fields "Has been distributed" and "% of distribution", are filled automatically on the basis of the document "Contingent formation" and are not edited by the user.

The data filtration in the area "Calculation of academic hours" may be performed by the button "Install the filter". It is necessary to use the button "Switch-off the filter" to cancel the filtration. It is also possible to use the function of searching the data if to press the button "Find". In the area "Data on distribution" the direct distribution of loading between teachers is made. To fill this area it is necessary to single out the specified line in the area "Calculation of academic hours" and to press the button "Add" (if it is necessary to add one teacher) or "Selection" (if it is necessary to add several teachers) in the area "Data on distribution". The selection of teachers is made according to the form of natural persons selection from among the staff of the chair specified in the document heading.

In the field "Quantity" there is specified the loading volume on the discipline (the period of control and a type of study is taken into account) the teacher is supposed to perform. In the field "Quantity of learners" there may be specified the quantity of learners the teacher works with; the filling of this field is important if it concerns term papers, final qualification works, abstracts, etc. If the loading is distributed completely, the data in these fields will be in green; if there has been distributed more loading than it has been planned, the data in this field will be in red; if the loading is distributed not completely, the colour is not changed. The total volume of academic loading for a structural division is displayed in the field "Total for the division". The total volume of loading assigned to the employee is displayed in the field "Total for the employee".

Besides the specified, it should be noted that in "1C: University" there is provided the support of the two-level system (bachelor, master and expert); the possibility to form and account curricula and educational programs (EP) in compliance with FSES3 and FSES3 +, versions of curricula and EP; creation, storage and processing of educational processes schedules; assignment of the curriculum disciplines for chairs and divisions of a higher education institution; integration with the programs of the curricula accounting (loading and unloading of data in the format of Federal State Budgetary Institution "IMCA"), monitoring of curriculum mastering results, drawing up of competences matrix, etc.

The document "Curriculum" is the main document that regulates the work of educational process planning subsystem in the configuration "1C: University". It allows to form curricula for various training directions and profiles for a certain period with the form of education, the level of training and some other parameters taken into account. The access to the document "Curriculum" is provided on the navigation panel in the section "Educational process planning" (Figure 10).

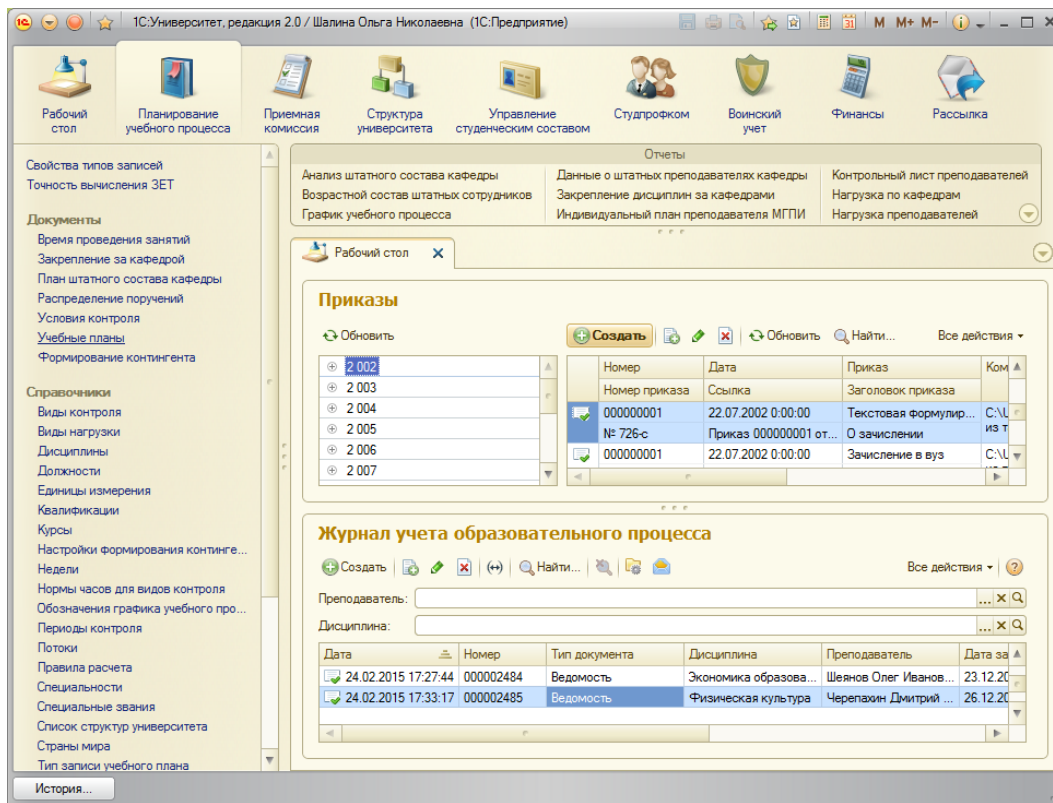


Figure 10. Access to the document "Curricula"

The filling of the curriculum may be carried out manually and by loading of the ready curriculum in the forms XML (standard format for curricula of training directions in HVE created with the use of a GosInsp package).

DISCUSSIONS

The practice of "1C: University" configuration application showed its advantages. Many modules of this system have analogs with traditional forms of training arrangement. Links between various blocks of data provide the formation of the current and final documents of training results, intermediate and total testing, tracking of debts, etc. that allows to automate control for the educational process and progress of all groups of learners. Among its advantages it is possible to note the Russified friendly interface, extensive help system, impressive functionality, a wide set of methods to supply the material, etc.; all these features allow dean's office staff and heads to obtain any analytical data independently, without programmers' assistance. The system modules connected with dean's office work automation provide the storage and information processing about the course of the educational process and its participants, and the automation of interaction between the three participants of an educational process: administration-teacher-student.

For example, "1C: The university" allows the Educational management to spend just several minutes to search the information on the students' contingent, the teacher who delivers the lecture, the number of academic hours according to the curriculum and the list of competences that should be developed within the frames of the studied discipline when it plans lectures for the students of all groups of the same years of studies and training profiles; traditionally, this procedure demands the collection of the relevant data from the chair and dean's offices of the relevant faculties).

Dean's offices using "1C: University" receive the automated reference system

which makes it possible to draw up, edit or simply review the curriculum, students' distribution into educational groups and subgroups, distribution and control of teachers' loading performance, to receive information on expelled students and so on. All the above-mentioned allows to increase the quality and efficiency of dean's offices work, to evaluate more precisely the consequences of solutions aimed to improve the educational process.

The following perspective opportunities should be singled out:

- 1) The formation and tracing of training sessions, work in scientific-research groups, societies, sports sections and studios;
- 2) Distribution of classroom fund and other resources involved in the educational process;
- 3) The consideration of days off and holidays in regard to the educational process planning.

CONCLUSION

Thus, the application of the specified functionality system "1C: University" increases the efficiency of dean's office interaction with key structural divisions of a higher education institution due to the integration of educational process planning modules, management of student's structure, "Finance", "Mailing", etc. That gives opportunities for:

- the dean's office: to quickly obtain all necessary information on teachers of the chairs that perform work at the faculty, students' ratings prepared by the teacher, subjects of term papers, monitoring of progress and attendance, information on students that fail to pay for training, etc.;

- chairs: to quickly obtain all necessary information on the students' contingent, distribution of students into groups and subgroups, the list of disciplines assigned for chairs, schedules of educational process and curriculum of all directions and profiles of training, data on students, information on the planned events, etc.;

- the educational management: to independently and quickly receive all necessary information on the students' contingent, schedules of educational process and curricula of all directions and profiles of training, summary data on examination sessions and intermediate certifications results, attendance of training sessions, teachers' academic loading, etc. for all faculties on a real-time basis;

- education and sociocultural activity management: to quickly obtain the information on the events planned at faculties, data on students' and graduates employment.

- financial and economic management: to quickly obtain the information on expelled students, students trained on contractual basis; on students' transfer from fee-paying education to free of charge training, etc.

RECOMMENDATIONS

The introduction of "1C: University" in the aggregate promotes the improvement of quality and overall performance of chairs and dean's office due to the decrease in time spent to collect, process and obtain required information. It will allow to evaluate more precisely the consequences of taking these or those solutions aimed to improve the educational process; it will increase the efficiency of faculty and all other divisions performance in a higher education institution; it will improve the quality of educational process.

The application of this system allows to carry out a number of functions of a traditional dean's office at a more technological level; to considerably reduce the time of certain procedures performance (e.g., information editing, search of students' personal data, etc.), to simplify the procedure of actions with data which are used

during the educational process; to automate the formation and preparation of necessary documents for printing (test and examination sheets, training certificates, orders, etc.). The system allows to realize the scheduling of the educational process: the management of a higher education institution (vice rector for academic affairs, the chief of the Educational management, the chief accountant, etc.) receive the tool for the analysis of educational process, calculation of academic hours for academic loading, scheduling, salary calculation, progress of a separate group, and the whole faculty as well.

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