**§35**

**RULES FOR THE DEVELOPMENT OF EDUCATIONAL AND METHODICAL COMPLEX OF DISTANCE COURSES**

***1. Educational-methodological complex of distance course (EMCD)***

The basic, original tool in the informational-educational field of DE is the educational-methodological complex.

***1.1. The main elements of the EMCD***

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| **Name** | **Summary** |
| **Cover sheet** | * Name of the university, faculty, and department. * Name of distance course, module * Names of authors * Year of publishing |
| **Abstract** | * Description (target reader, its aims and objectives, what educational needs it meets). * Information about authors (preferably not as formal as in the documents) and contact information. |
| **Course program** | * List of course modules (sections) |
| **Methodological guidelines for working with the course** | * Notes on studying the theoretical part, preparing to different types of seminars and practical activities, ie a detailed description of the students activity while studying the course. * calendar and thematic plan. |
| **Study materials** | These may include:   * hypertexts; * lectures; * selection of articles and book excerpts; * movies * etc. |
| **Practicum** | Seminars   * list of seminars * lesson plans (issues for discussion) * list of recommended resources for training.   Practical and laboratory work, role games   * list of issues, * conditions, equipment, requirements for performing the work * lesson plans (research issues) * list of recommended resources for training, * report forms. |
| **Control set of tasks** | These may include:   * questions and tests for self-control with keys, * progress tests * Exercises for self-study and tests, * exam questions, * list of abstracts, graduation and qualification works. * final tests, etc. |
| **Glossary** | * basic concepts, terms and definitions in the text of educational materials. * personalities in the training material. |
| **List of information sources** | * list of the main textbooks. * list of additional textbooks. * links to network resources. |

The course should be divided into relatively small, logically closed parts - sections (modules). Each section (module) is a standard teaching unit, which includes clearly defined amount of knowledge and skills to be studied for some period of time, or - a credit unit, the quality is defined by means of course works and progress tests, as well as the final test, credit works and examinations. Hypertext allows splitting the text of section (module) into smaller structural units - lessons. Each section (module) has to have a title, while each lesson (module) - subtitles.

***2. Aims and objectives of distance learning course***

The goal is the ultimate result you have put forward, while the task of training is the stages of the works implemented, the actions you do to achieve this goal.

**2.1. Methodological guidelines for working with distance course (module)**

Methodological guidelines for working with distance course are necessary. While learning distantly, a student works more independently, so you should try to foresee all possible problems and issues associated with all stages of learning - the beginning, the end, the process of assignments, etc. To remove these difficulties there are the guidelines for the course.

To facilitate the students first steps and adapting them to work with your materials, it is advisable to define separately the following items:

 Computer requirements. Additional programs necessary to work with the course. The main technical problems and ways of their solution.

 The basic method to work with the course (individual work, team work, group work with the teacher, etc.).

 Navigation on the course (it is possible to present an interactive training scheme from module to module with tasks).

 The symbols and abbreviations in the course.

 The number of modules in the course. The structure of the modules.

 Estimated time to study the materials.

 Recommendations on the interaction with a teacher.

Methodological guidelines should also contain instructions to each module of the course, prior the actions of listeners. The task description for each module may include:

 aims and objectives of the module;

 compulsory literature;

 further reading on the module;

 list of exercises and activities to be performed;

 requirements for the content, length, formatting and presenting control tasks;

 criteria for tasks assessment;

 terms of admission, verification (review) of tasks;

 approximate allocation of time to work with the module, for example:

o Reading - 1.5 hours (to better get the material you should break into 4-5 parts);

o individual credit works - 4 hours;

 Assistance. Tips, the listener can find in case of difficulty. For example, the format of a message addressed to the teacher via e-mail (the subject of the message sending should be approximately as follows: "The course of the history of literature. The issue") should be noted;

 Frequently Asked Questions module.

Describe each module as detailed as possible, let the maximum number of instructions. Therefore, you protect yourself from repetitive questions and help students find their way in their new course.

Also a schedule of the course is drawn up, and includes the following:

 Dates of the course

 Schedule of studying the sections of the discipline

 Forms and terms of reporting

 Schedule of practical activities and seminars

 Schedule of consultations

**2.2. Materials for studying**

**Hypertext**

A detailed, coherent, systematic exposition of the content of the module. This text reveals the contents of each training element. Hypertext may contain links to materials posted on the Internet. The style of presentation is basically academic. Information should be sufficient to perform all control tasks.

**Lecture**

There is over viewing material with the stressed key issues, problems. Show the relationship with the material of other blocks. The style of presentation is close to the live communication, so may include ("will you take notice", "will you think"), rhetorical questions, problem situations, references to the knowledge and experience of students. The text of the lectures can be presented in a succinct form or developed, and is usually divided into separate parts logically complete. Great opportunities to illustrate the material being studied are multimedia: audio, video, graphics, text, animation, and others.

These elements enhance the quality of the lectures and allow holding the attention of listeners. You can use video and audio recordings of lectures.

**Selections of articles or book excerpts**

These are used if the literature with systematic and comprehensive content is in volume publications or unavailable locally.

**Links to Internet resources**

The Internet is a powerful source of information that should be fully used to create a distance course. A set of useful links can compensate the lack of other materials.

**Summary tables, charts, diagrams, schemes, graphs**

They reflect the most important information and links. Do not provide the excess of tables, charts and graphs. In the development of graphic materials it should be guided by the following requirements:

 target and semantic significance of elements and links;

 their hierarchical arrangement;

 simplicity and clarity of schematic representation;

 numbering, headers, brief comments.

**Reference materials**

They are used if to understand the problem it is necessary links to:

 statistics;

 regulations;

 some information from other substantive units;

 historical information;

 biographical data, etc.

**Glossary**

It is included in the module if the text includes unclear words and phrases, new terms, foreign words not explained in the text.

**Bibliography**

In this list ,besides annotated literature and used materials, additional literature should be included so that the listener can use at their discretion.

**Making a list may be carried out in different ways:**

 In alphabetical order by author's name or book title.

 In the order of importance for solving the issue. The importance of sub-headings may be referred to a mandatory, primary, secondary.

 By thematic divisions of the module.

Description of references is made in compliance with State Standard.

*While developing the course of distance learning it should be taken into account the isolation of the listener. Materials should be supplied with the necessary explanations, be user friendly and attractive, all the difficulties of the learning process have to be foreseen by the authors.*

***2.3. Preparation of the text***

A text, the most common and easily created kind of information, it is the foundation of any course. There are a few simple rules that should be guided in the preparation of the materials for distance course:

1. Text should be compact, free of complex terms and abbreviations.

2. Material of the page should be divided into small paragraphs and reduce the amount of material presented on one page (or the computer screen). Otherwise, you may experience the following problems:

 First, the "large text" causes tiredness and provokes passiveness of the readers. If they are passive, they pay less attention to the material and the material will not be well studied. Both factors (decline in attention and worse assimilation) do not meet the requirements of the course. Passive audience usually does not assimilate the material and does not participate in the learning process.

 Second, the larger the volume of material, the more often has to scroll the page. Scrolling distracts the attention.

 Thirdly, attention is naturally drawn to a point in the middle of the screen. Therefore, the listener may lose sight of the important parts shown in the upper or lower part. Scrolling text leads to the fact that important aspects are easy to lose. The ideal placement of the basic concept or idea should be in the center of the screen(about a third of the distance from its upper limit), since it is to this point a gaze is usually reverted.

If the training material length is very large, and the division into separate fragments is not possible, it should be placed for download as an archived file or in the library of the course.

3. Use hyperlinks in the text, including external links, but do not overload them, as a listener can lose a track of information.

4. It is desirable to use the visual aids - tables, charts, graphs and the like that allow to concentrate information and thereby reduce the size of the training text.

In addition, audio, video, animation and other inserts help to explain abstruse points, improve the perception of complex models, etc.

Think of the drawings, diagrams, graphs, tables, and color you can include them in the text; any audio, video files and so on are suitable for use in a particular dose.

5. Use the techniques of focusing attention. Visually, the on-screen text information can be identified in several ways:

by its location,

 alignment

 background,

 choice of font,

 font and font color (in the same box it is not recommended to use more than 3-4 colors at once).

Perception of the text is much more effective if an eye can cover the entire line, finished fragment or paragraph not individual words or fragments of phrases.

A very important point is the use of a single style of design.

6. Check your spelling. Minor typos will always be found, but it is better to deduct the entire text carefully, as they weaken the content. Be careful, the spelling checker cannot be trusted to 100%!

7. Give the opportunity to print educational materials (preferably in one file so that listeners do not have to print each section separately.)

**3. The forms of organization of training process in DE**

**The form of organization** of training process or organizational form of training is a learning process in terms of the place, time, number of students, the characteristics of interaction of the participants in the educational process (ie. a teacher and a student), as well as the objectives, content and various learning technologies.

Distance course should not be just a set of materials for the study and control tasks, it is a lively dialogue between a teacher and students.

Everyone is familiar with such traditional forms of organization of teaching, as lectures, seminars and conferences. However, the technological features of DE bring their own specifics in traditional forms of learning.

Before considering possible forms of training it is necessary to figure out what kind of training activity is technically possible to organize in the Internet?

All the activities of students, who are users of the Internet can be divided into three groups:

1) searching for information - work with browsers, databases, help systems, and so on;

2) communication - e-mail, chat rooms, mailing lists, online-forums, video conferencing, ICQ, and so on;

3) the publication in the network - creating web pages and websites.

Let us consider how you can use these opportunities for the organization of learning activities of students.

**Search for information:**

Finding information on the Internet can accompany these kinds of study, such as:

 Writing essays,

 review of the topic on the site,

 search for "treasure"

 selection of multimedia material to the subject,

 illustrate their text with materials from the Internet;

**Communication:**

 virtual meetings,

 correspondence,

 discussion.

**Published online:**

 creation of thematic web pages, web-quests,

 publication of final papers, articles, thematic data banks,

 creation of photoserials and other multimedia resources.

The following forms of organization of teaching:

**1. Lectures.** Lectures in distance learning system can be presented in different types:

 audiolectures

 lecture via video conference

 e-lecture

**2. Consultation.** They may be individual and group (no more than 5-7 people at a time). They may be real (chat, telephone, ICQ, Skype) and deferred (e-mail, forum) time.

**3. Seminars** (panel discussion topics of the curriculum by students under the guidance of a teacher). May be implemented by using:

 video-conference

 chat

 Forum

**4. Projects** (group, individual research, creative, informational, technical base: all the services of the Internet).

**5. Laboratory and practical classes.**

virtual laboratory practice (simulated experiment)

work with devices in remote distance (remote network access to real laboratory settings)

6. Individual assignments (essays, reports, tasks, and others.).

**7. Control (online tests, exams).**

8. Situation analysis (case studies). The task of the situational analysis is a complex case study and evaluation of the decisions taken.

**4. Forms of monitoring of educational activity**

In developing the course, it is desirable to think about how to organize on its basis the interaction of a teacher and students. To do this, in addition to the support of lectures with tests for control and self-control, it is necessary to prepare practical exercises that can be performed individually or in a group. The term "task" is quite broad and includes problem solving, written exercise, etc.

Here are some examples of tasks that can be incorporated into teaching materials:

 *solving problems*. It can be interactive tasks their answers are immediately forwarded to the teacher or become visible to the user;

 *essay writing and defense:* essay- review, essay -survey (abstract in electronic form is available on the website of the course, and the defense is carried out in the form of chat or discussion in the teleconference);

 analysis of the existing essays on the subject in network, their assessment (available on the forum of a distance course), the creation of rankings of student work (voting on the forum);

 review of the topic under study and its presentation on the site(on the mailing list or forum);

* review* of professional conferencing, analysis of discussion of urgent problems (work is placed in the separate portfolio);

 *«treasure hunt*». A teacher finds (or hides) somewhere in the network an interesting document that students have to find via search engines, by using keywords, formulating a given problem in other words( an interesting task

for those who study foreign languages);

 Listening and analysis of thematic radio broadcast over the Internet (the analysis is placed in a separate portfolio);

 *review* and analysis of thematic television program or videos on the network;

 collection of multimedia materials for a given topic (text, illustrations, animations, video, audio), (work is placed in the portfolio of an individual or group);

 illustration of the found text with your multimedia materials (graphics, charts, tables, etc.)

 expert consultation. Students may seek clarification from the person who is considered an expert in the field (questions and the answers are posted in the forum of the course);

 surveys. It is selected the topic of interest to the audience, for example, related to the election, and polled the greatest possible number of people in the network orwith the conventional survey methods. The results are analyzed and made available to all comers, posted on the website of the course;

 discussing a given topic or issue (in asynchronous newsgroup or forum). It should teach students to argumentate own position;

 *consultation*.It may be conducted by electronic mail. Sometimes it can be carried out in the form of chat. In this case, the teacher assigns a regular time when he/she is in the network - for example, on Wednesdays from 18.00 to 19.00;

 *thematic chat*. It can have various scenarios . When preparing assignments for a chat in the electronic textbook, enter the name of the topic and issues for discussion;

* presence at a distance*. Video conferencing can give students the opportunity to participate in a variety of educational events (seminars, conferences, presentations);

* virtual lab. works* : a good opportunity for mathematics, physics and other natural sciences. Carried out with the assistance of DLC;

 the creation of videotapes and photoserials. Modern digital cameras will help to create a video or a series of images on the given topic. This task may be given to the students - to create a web page, a photo album with a description of a process.

Photoserial takes much less space than video, and often shows the same operation clearer. It can be used during studying humanities, as well, as they allow you to show the development of the situation.

**This list is not exhaustive. Each teacher has his/her favorite methods of work that can be adapted to the new technology.**

Each module can be used not more than two or three types of credit jobs.

The organization of the control of educational activity on the network is also very important is the question of who will access the knowledge of students.

**The performed tasks can be checked by:**

 **Teacher.** It is the most convenient way to monitor, because here comes the personal contact of the teacher and students. The problem here is to cover students by one teacher. The experience of distance learning courses has shown that one teacher on the network can contact no more than 20-30 students.

 **Other students.** When conducting remote training pair work and group work are often used to check written works

 **Computer program.** Since many of the control tasks to be performed by the students in distance learning on the Internet, are more or less standardized, you can process them by a specially prepared computer program. As an experiment, we can offer a system for verifying the **ejudge** for programming tasks.

**5. Script of the development of distance learning course**

1. Define goals and objectives of the course.

2. Take into account the characteristics of the target group for which the course is created and choose the method of distance learning, taking into account characteristics of the listener and technical support of course objectives.

3. Organization of educational process, methods of interaction between teachers and students, the types and forms of study.

4. Structuring and preparation of teaching material. Divide the course into

Forums and divide the contents into small meaningful parts - classes (modules).

Each section and each class module should have a title. The course should not only be well laid out, but also is convenient structured site.

5. Preparation of the script implementation. Selection for each module corresponding forms of expression and presentation to the audience section title, text, figures, tables, graphs, sound and video, and etc. (according to the content).

6. Preparation of media fragments. Development of figures, tables, diagrams, drawings, video sequences, according to the requirements of ergonomics; layout modules each section Dos ergonomic point of view.

7. Selection of the list of references and hyperlinks to Internet resources (annotated list of the best sites on the subject, the sites of electronic libraries and electronic stores) selection for each module hyperlinks to internal and external sources information on the Internet. Selection of external hyperlinks is one of the most difficult tasks of the author of the course. Careful selection of links to documents on the network will free the audience of the need to wander around the Internet in search of information. Placing links with annotations to specific pages of the site - the source if necessary. It allows you to link the course with the world's best sources of information.

8. The system of monitoring, evaluation and certification. Selection of tests, tasks, test questions, tasks for modeling, the essays and term papers, preparation of tips. Designing the ways to consolidate the knowledge and skills and providing feedback connection.

9. Development of teaching materials for the study of the course, the course calendar.

10. Placement of course materials in the system DE.

11. Testing of the course at different screen size and different browsers.

12. Testing of the course.

13. Modernization of the course on basis of the results of testing.