The scheme of business processes LMS NUUz

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Abstract—**This paper describes the LMS process, which are designed specifically for the National University of Uzbekistan to support the traditional educational process. We used BPMN methodology for describing business processes of LMS NUUz.**

Keywords-component; LMS; curriculum; educational process; educational programs.

I. INTRODUCTION

The National University of Uzbekistan used Learning Management System (LMS) - learning support system that can be used by all participants in the educational process.

The system is developed, taking into account the specifics of the educational process in our university.

The LMS NUUz each student has the opportunity to receive personalized information about an individual curriculum, academic achievement (electronic record book) and individual schedule [1]. All materials published on the websites of the teacher studied or passed courses available to students at any given time.

The teacher can use the LMS to accommodate NUUz materials for classes, management worksheet, exchange messages with the students to use the test to verify the knowledge acquired intermediate and final control, organize, through the LMS NUUz delivery of projects and homework.

The LMS NUUz implemented services [1]:
- the possibility of self planning their educational trajectory using module "Elective courses". Using these module, each student has the opportunity to apply not only to the discipline of the variable part of the curriculum their educational program, but also the discipline of other programs;
- to improve the quality of teaching at the University, as well as to obtain feedback from the students developed a special module, "assess their courses." At the end of each module, each student creates an individual profile of the teachers with the evaluation criteria. All the results of the survey are anonymous.

LMS system (Learning Management System) - a system of on-line support of the educational process NUUz. It contains disciplines working curricula attached to them by students. In each discipline a teacher has the ability to:
- to place training materials;
- supervise knowledge through testing;
- Maintain gradebook and report on the learning activities of students;
- Collect and store the independent work of students (essays, term papers and dissertations, projects, etc.);
- Meet and consult with students.
- The system recorded all students NUUz.
- The system is connected with the base from which it imported all approved by the working curriculum subjects with designated students to study it.
- If discipline is a discipline of choice or electives, students are attached to it manually by an administrator LMS system.

Implementation of the requirements for modern educational institutions from the management of the university, its customers (in this case by the client understands students - individuals involved in the educational process of high school, and their agents - both physical and legal persons) and the educational environment. It is achieved by controlling the educational process in accordance with certain concepts and principles [2].

LMS is based on three concepts of the educational process: modularity, individuality, encapsulation.

The principles laid down in the LMS, implemented in the technology sub-systems and processes.

The composition process is typical and may be different in the implementation of the volume or the representation of one or another direction [3].

Here we restrict ourselves to the study of processes of the LMS NUUz.

II. THE SCHEME OF BUSINESS PROCESSES LMS

As realisations of various processes are interconnected, all processes are grouped in some independent tasks:

1. Planning
- ***The task «Formation of educational programs»,***
- ***The task «Administrative curriculum»,***
- The task «Schedule formation»,
- The task "Financial planning".

2. Accounting
- The task «Accounting of clients»,
- The task «Accounting of resources of educational process»,
- The task «Accounting of an education-methodical material»,

- The task «Accounting of training courses».

3. Reporting

- The task «Accounting of results of educational process»,
- The task «Formation of diplomas and the academic certificates»,
- The task «Document's flow».

In this paper, we consider only the selected task.

Within the framework of the planning of the educational process is carried out:

- Formation of the educational programs of the university;
- Select by students of training courses;
- Formation of the university administrative training plan for the implementation of educational programs in accordance with the material and technical base and Teaching Staff;
- Creation of a "template" schedules to distinguish the use of scarce resources;
- Formation of a week schedule, taking into account the current state of the material and technical resources (MTR) and Teaching Staff for each student individually.

Within the framework of the account of clients, material and technical resources, of teaching staff, training and methodological support, the results of the educational process is carried out:

- Accounting logistic support training process;
- Accounting of teaching staff;
- Accounting for customers of the university;;
- Accounting modules of the curriculum;
- Individual accounting of the educational process results.

Within the framework of planning, accounting and analysis of financial flows and the performance is carried out:

- Planning of revenue from tuition fees;
- Fixing and analysis payment training;
- Fixing the financial obligations of the university;
- Decision on the execution of the financial obligations of the university;
- Fixing performance of the financial obligations of the university;
- Formation of the financial budget of the university;
- Monitoring performance of expenditure and revenue side of the budget;

Within the framework of reporting institution of higher education outside certification organizations, both public and foreign made:

- Formation of reports for submission to the state controlling authorities;
- Formation of reports for submission to the international supervisory bodies (AACSB, ECTS, etc.);
- Formation of academic documents for customers.

Within the framework of formation of an information portal to provide information to the participants of the educational process is carried out:

- Publication of information on existing educational programs of the university and the current curriculum;
- Publication of information on students' ratings, their scientific and practical and project activities within the walls of the university;
- Publication of the results of the educational process;
- Publication of general university normative, reference and other information.

A. Processes of a task «Formation of educational programs»

Function (task) is necessary for the formation of the educational university programs, taking into account resource constraints and in order to solve educational problems. On the basis of the educational program, formed for the duration of study, carried out the operational plan for each period of the educational program.

Below we describes on detail the tasks and subtasks specified in the figures 1-9.

B. Processes of a task «Administrative curriculum»

Administrative curriculum is used to negotiate the implementation of several training programs at a total resource base (teachers, students, material and technical resources). Each training program has its own unique content and forms of training. Administrative curriculum (hereinafter AC) is prepared for each training program for the period defined by the schedule of the educational process (SEP) (a document that fixed the dates of beginning and end of the administrative period of planning, training mode - training, weekends, holidays, training time).

Below we describes on detail the tasks and subtasks specified in the figures 10-12.

CONCLUSION

In this paper we construct following process diagrams of LMS NUUz:

- Function «Formation of educational programs»,
- Function «Administrative curriculum».

Similarly, we can construct other schemes of LMS NUUz processes.

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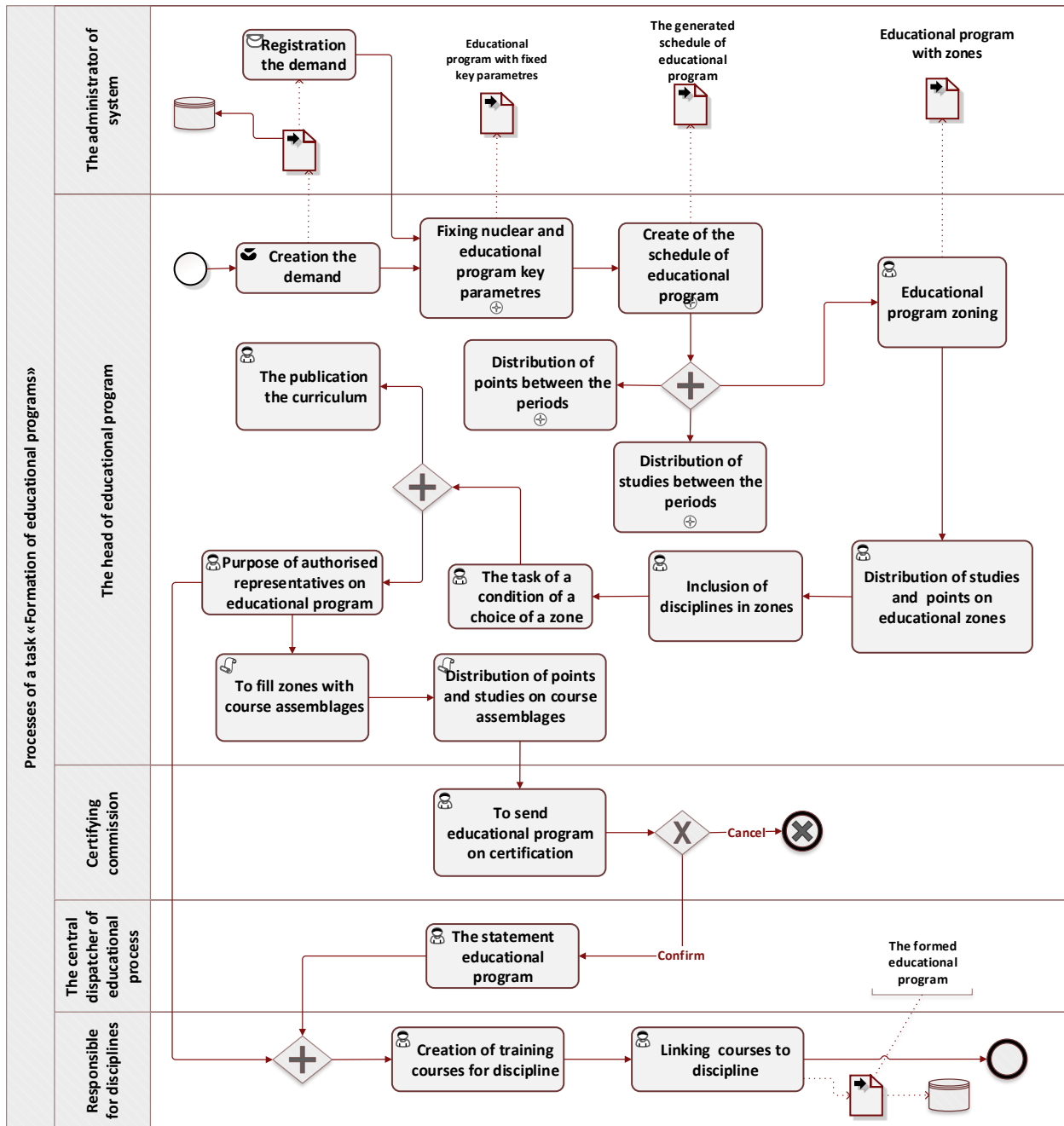
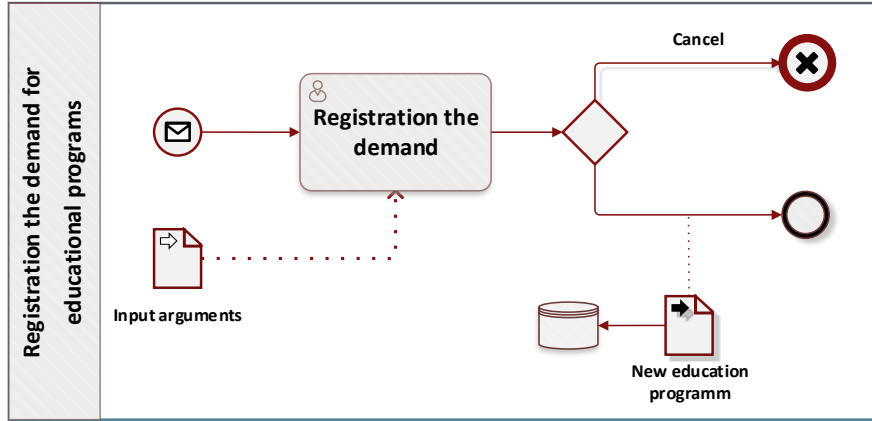Figure 1.   Processes of a task «Formation of educational programs»
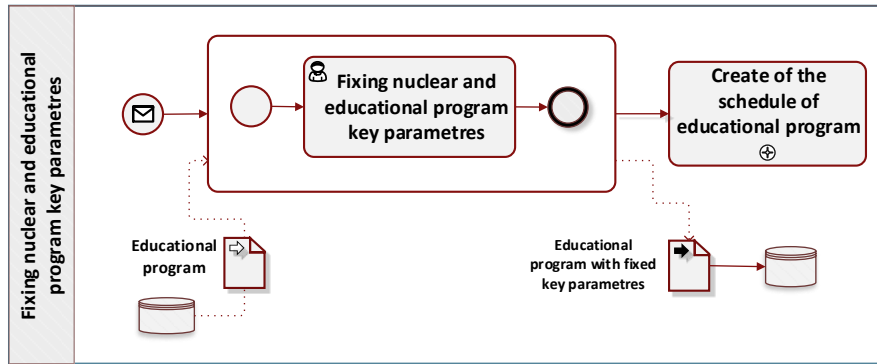
Figure 2. Formation of educational programs

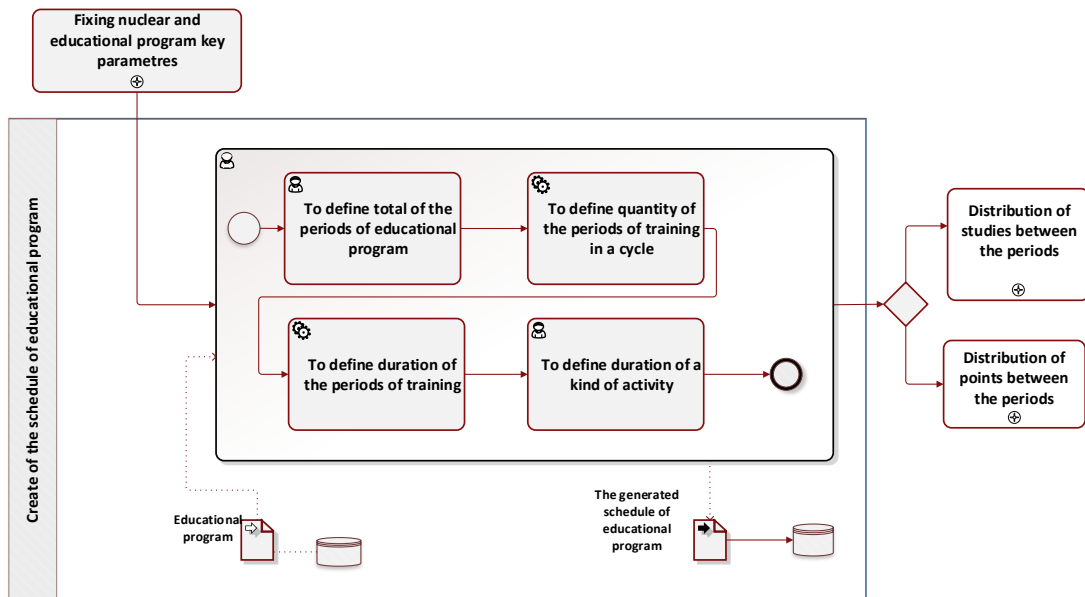Figure 3. Fixing nuclear and educational program key parametres

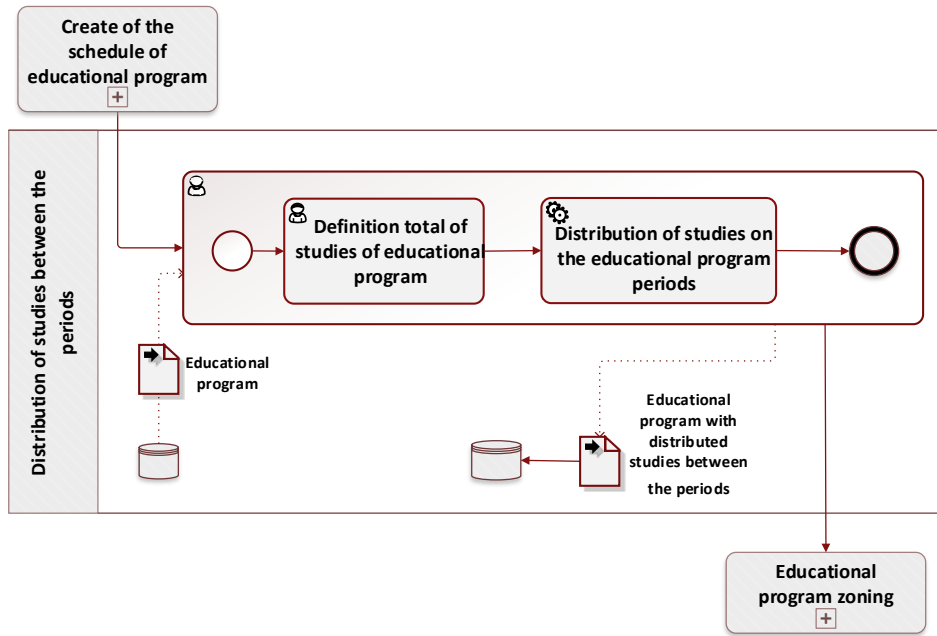Figure 4. Create of the schedule of educational program

Create of the schedule of educational program +

Distribution of studies between the periods

Definition total of studies of educational program

Distribution of studies on the educational program periods

Educational program

Educational program with distributed studies between the periods

Educational program zoning +

Figure 5. Distribution of studies between the periods

Create of the schedule of educational program +

Distribution of points (credits) between the periods

Definition total of credits (points) of educational program

Distribution of credits (points) on the educational program periods

Educational program

Educational program with distributed credits (points) between the periods

Educational program zoning +
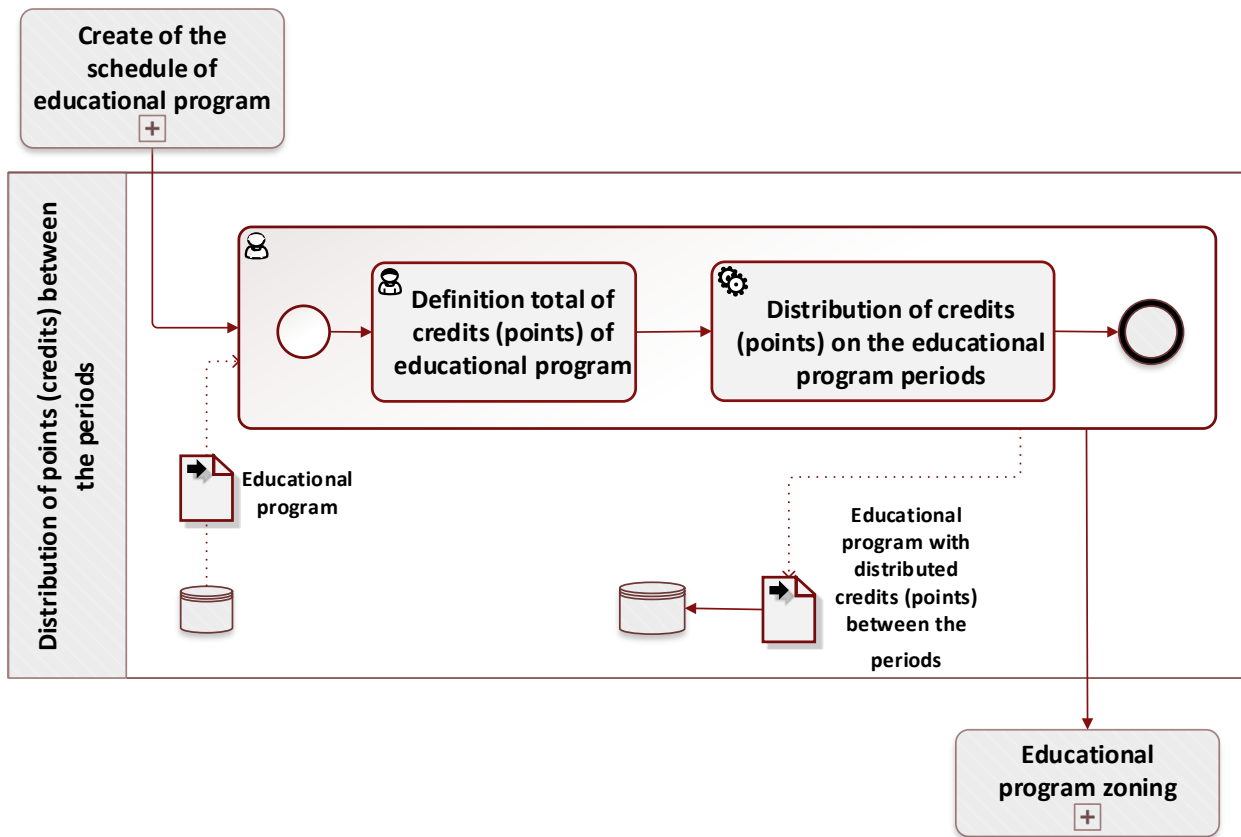
Figure 6. Distribution of points (credits) between the periods
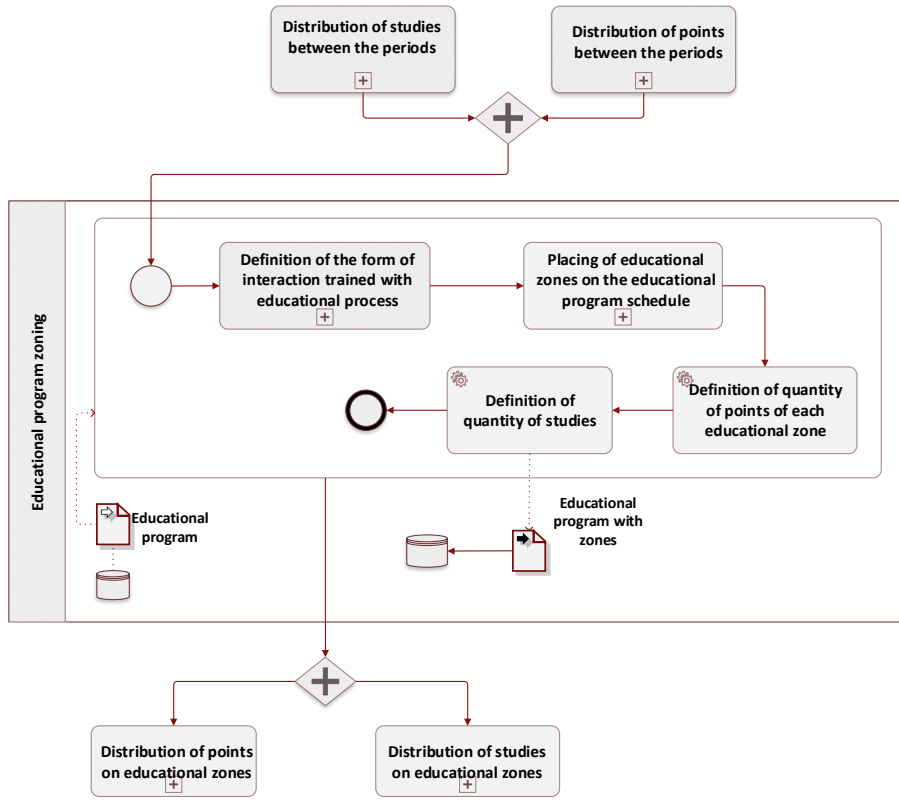
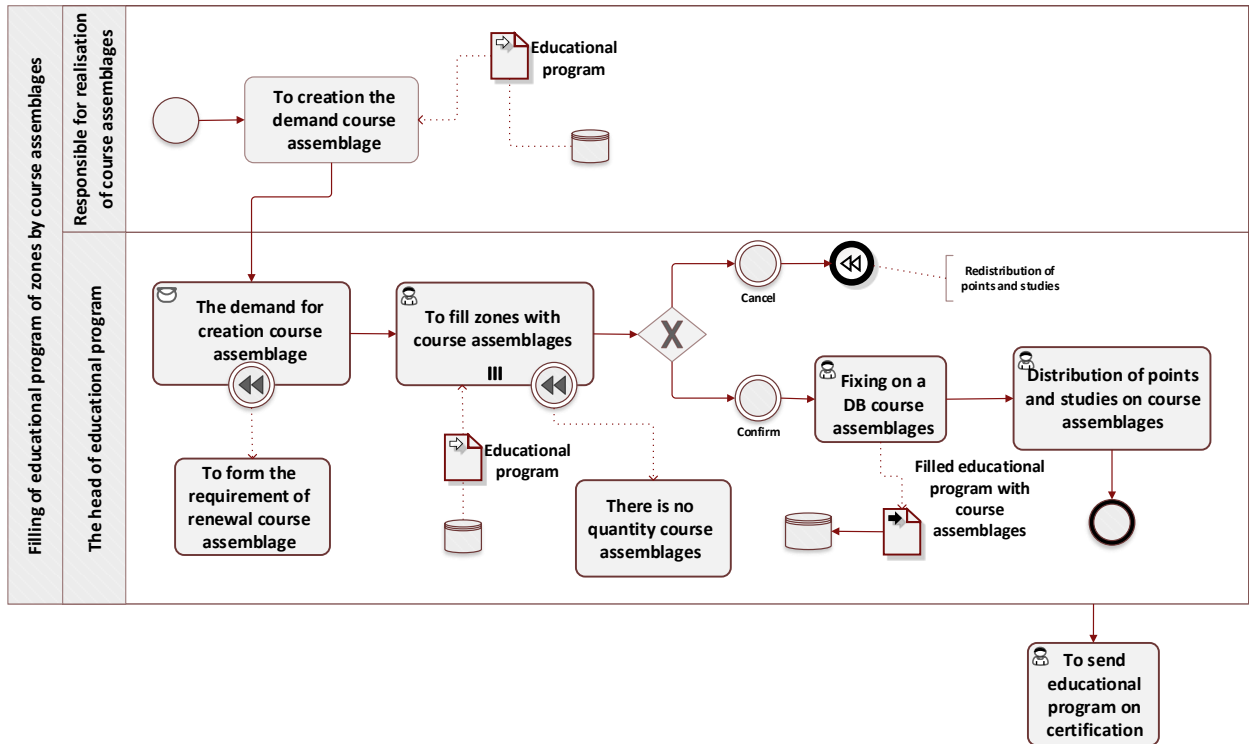Figure 7.   Educational program zoning

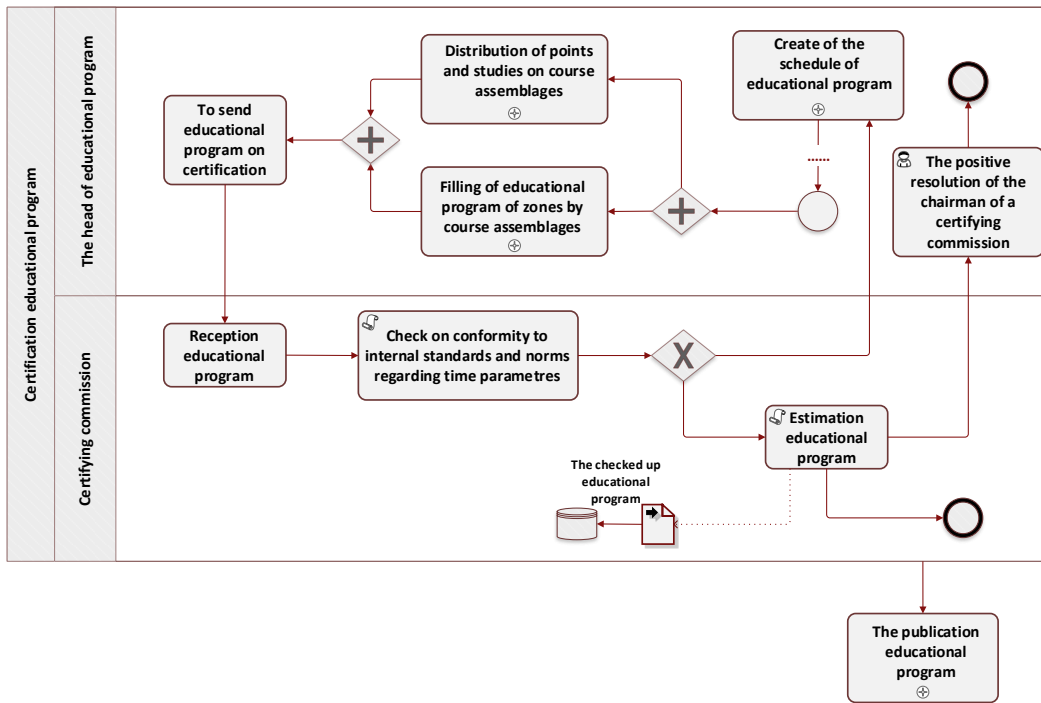Figure 8.   Filling of educational program of zones by course assemblages

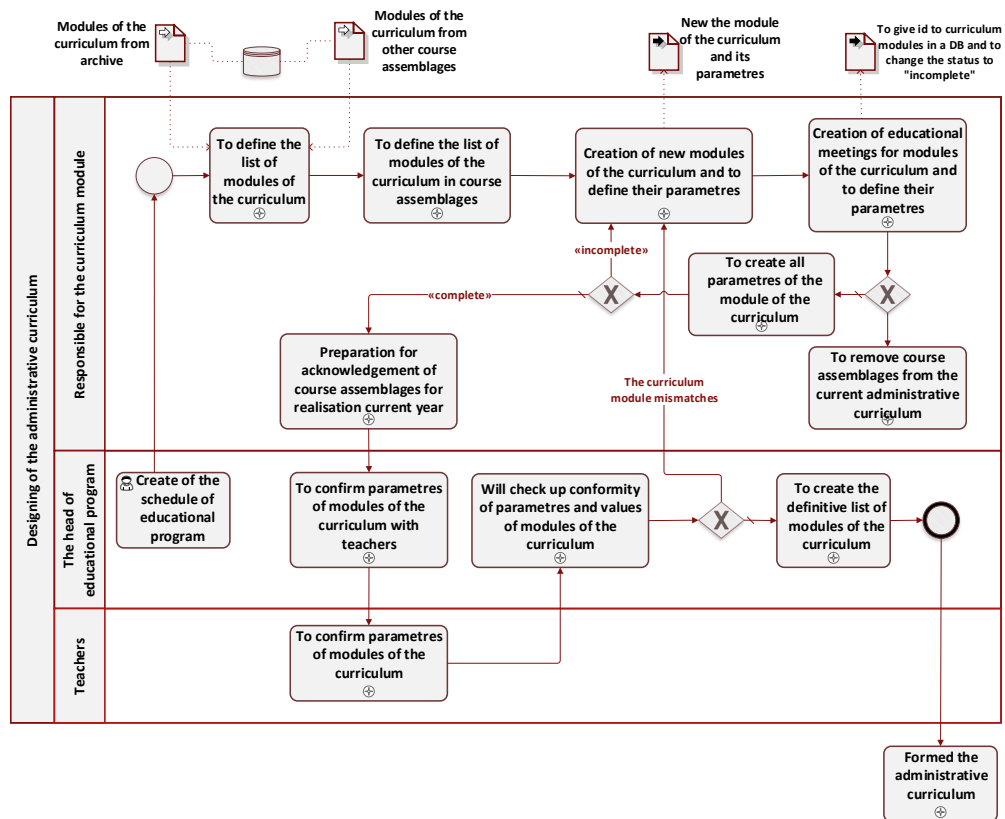Figure 9. Certification educational program

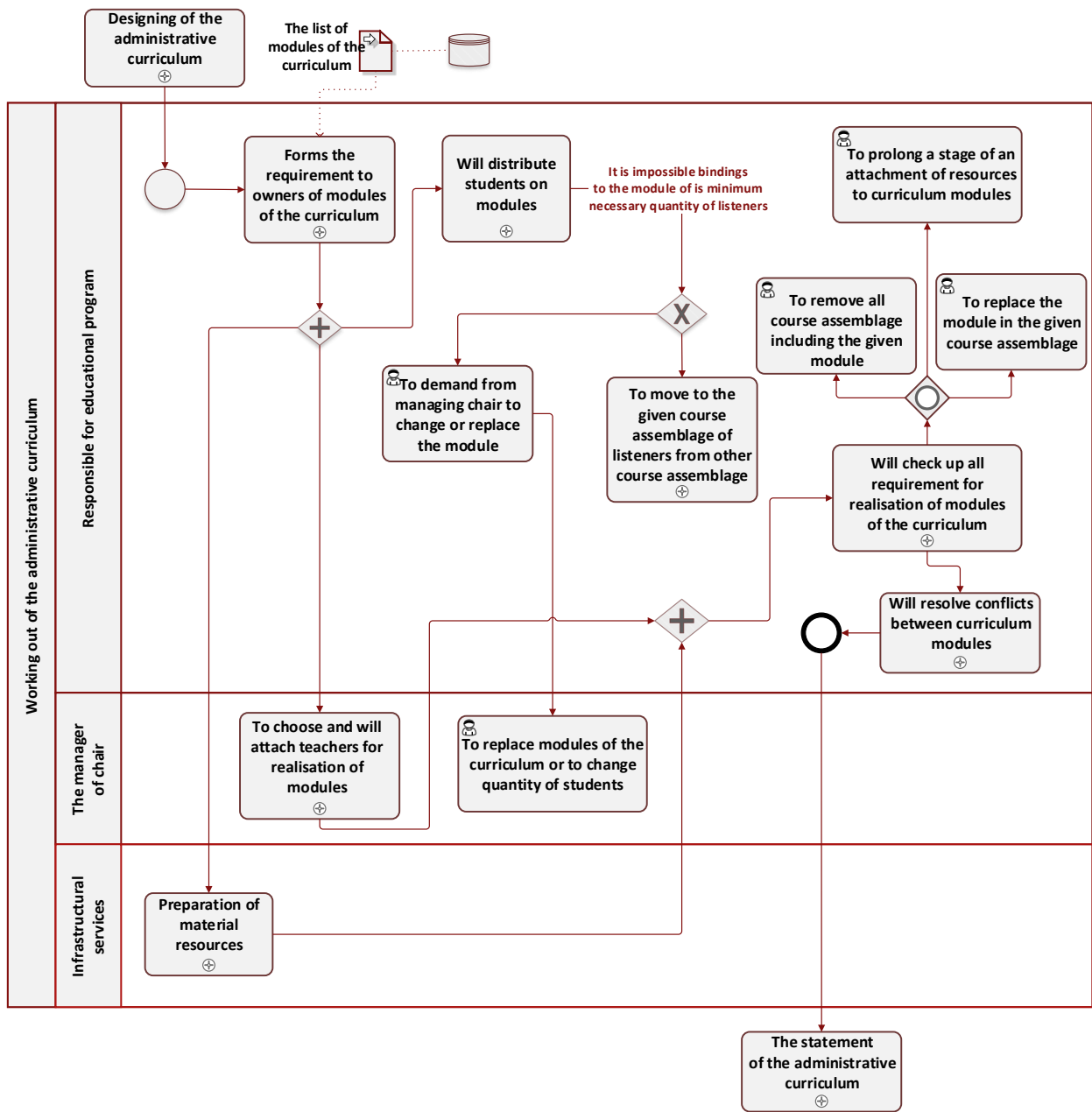Figure 10. Designing of the administrative curriculum

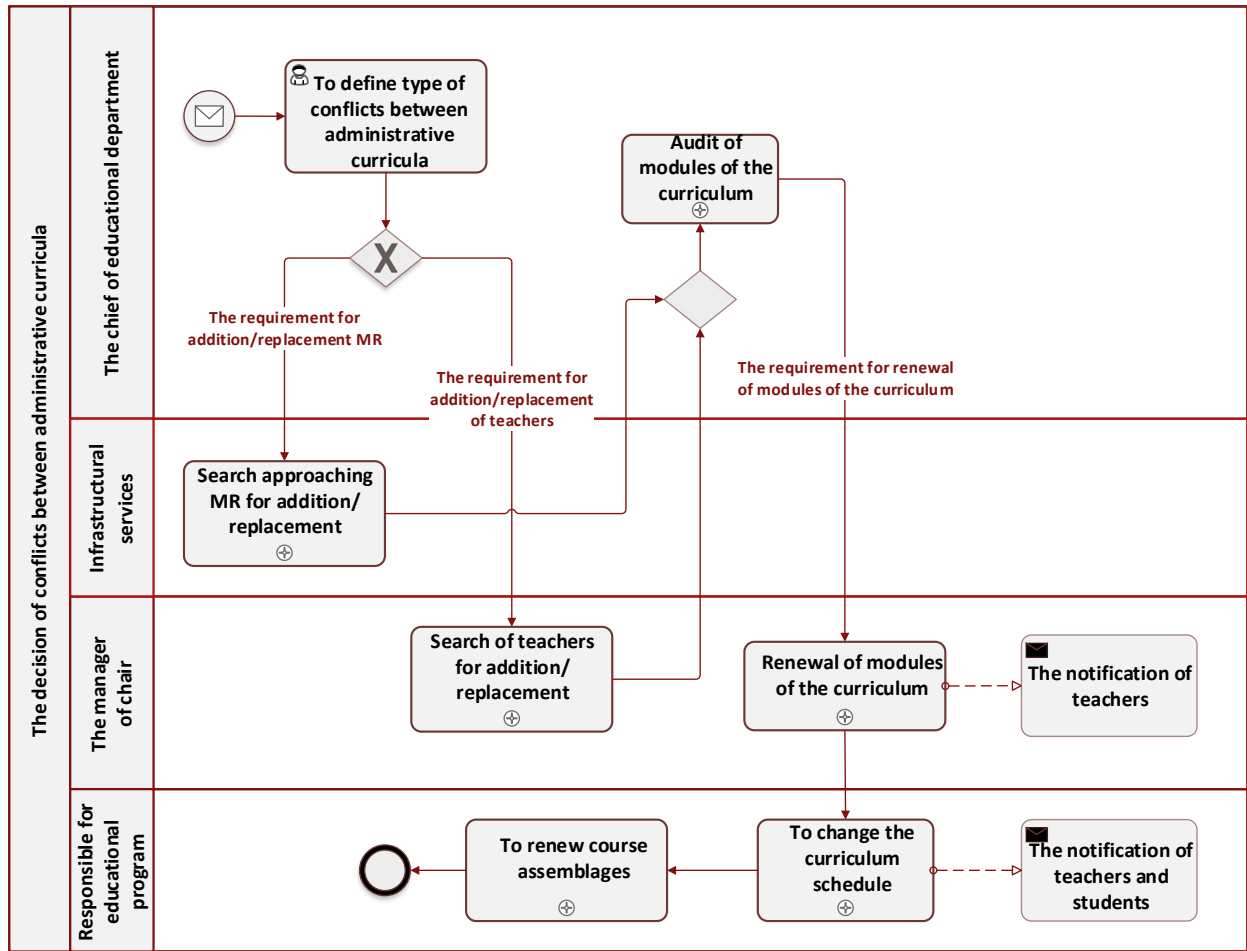Figure 11. Working out of the administrative curriculum

Figure 12. The decision of conflicts between administrative curricula