

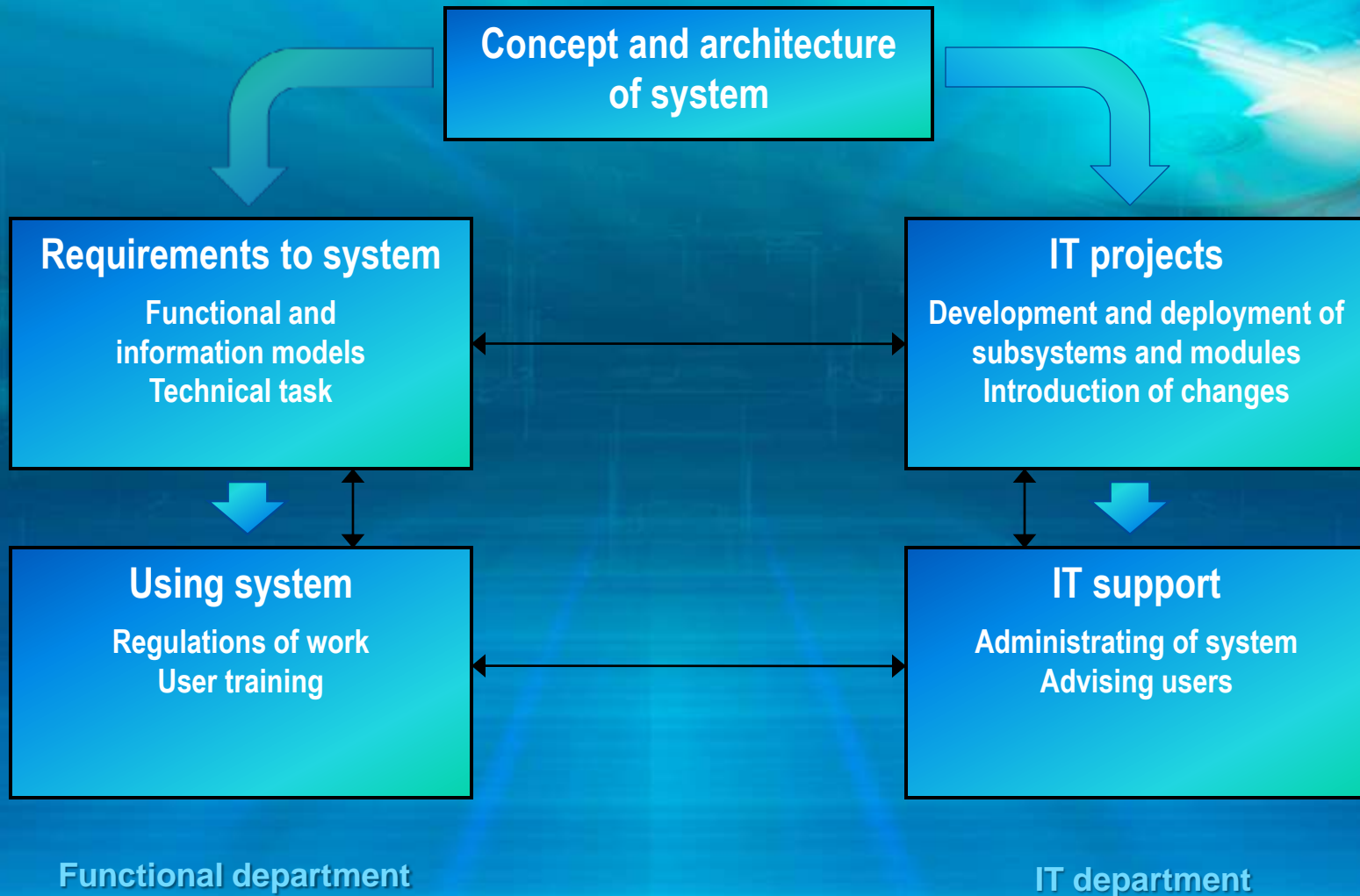


INTEGRATED INFORMATION SYSTEM OF UNIVERSITY

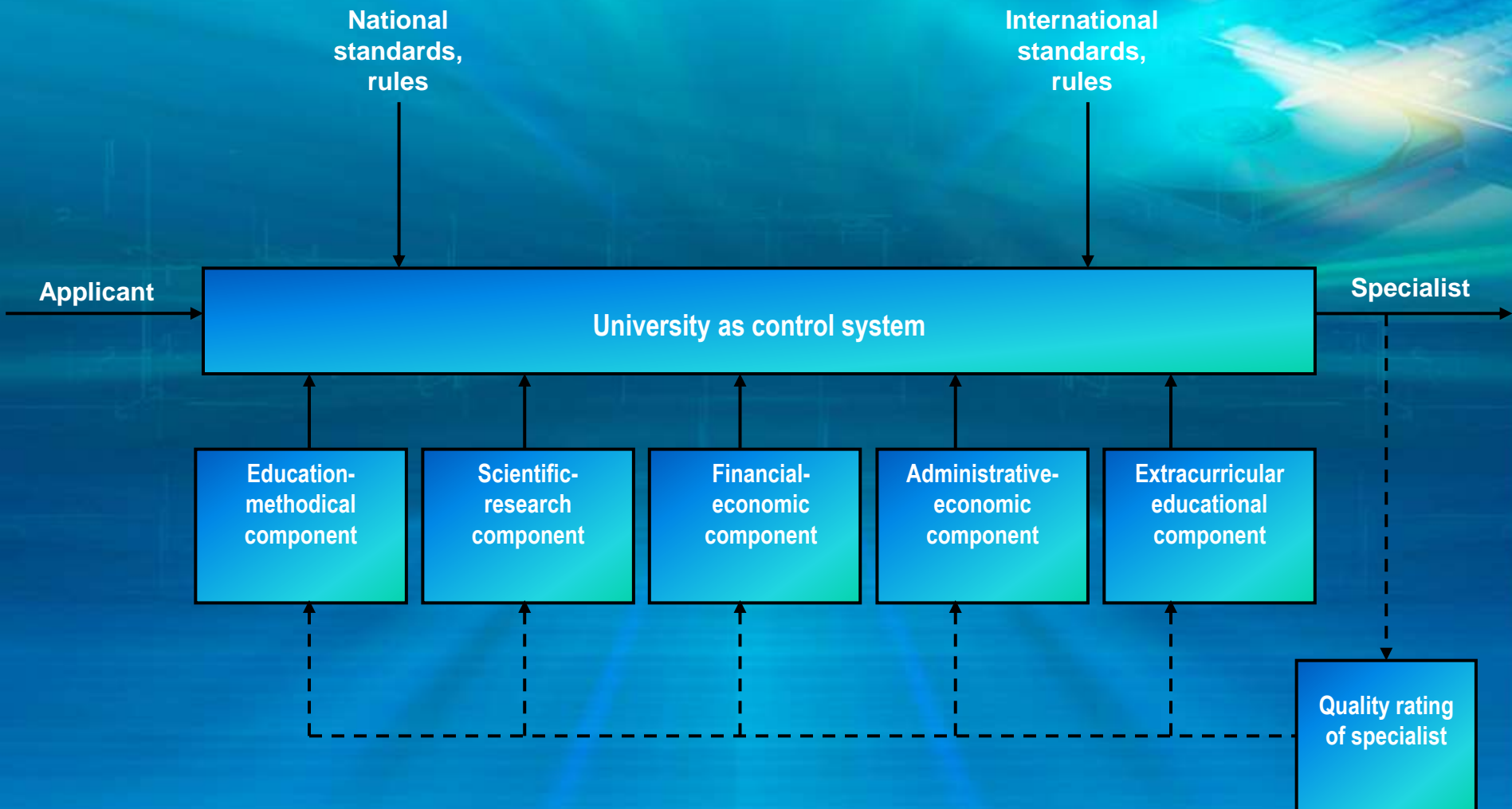
Experience of Sumy State University

Vladislav V. Khomenko
v.khomenko@cis.sumdu.edu.ua

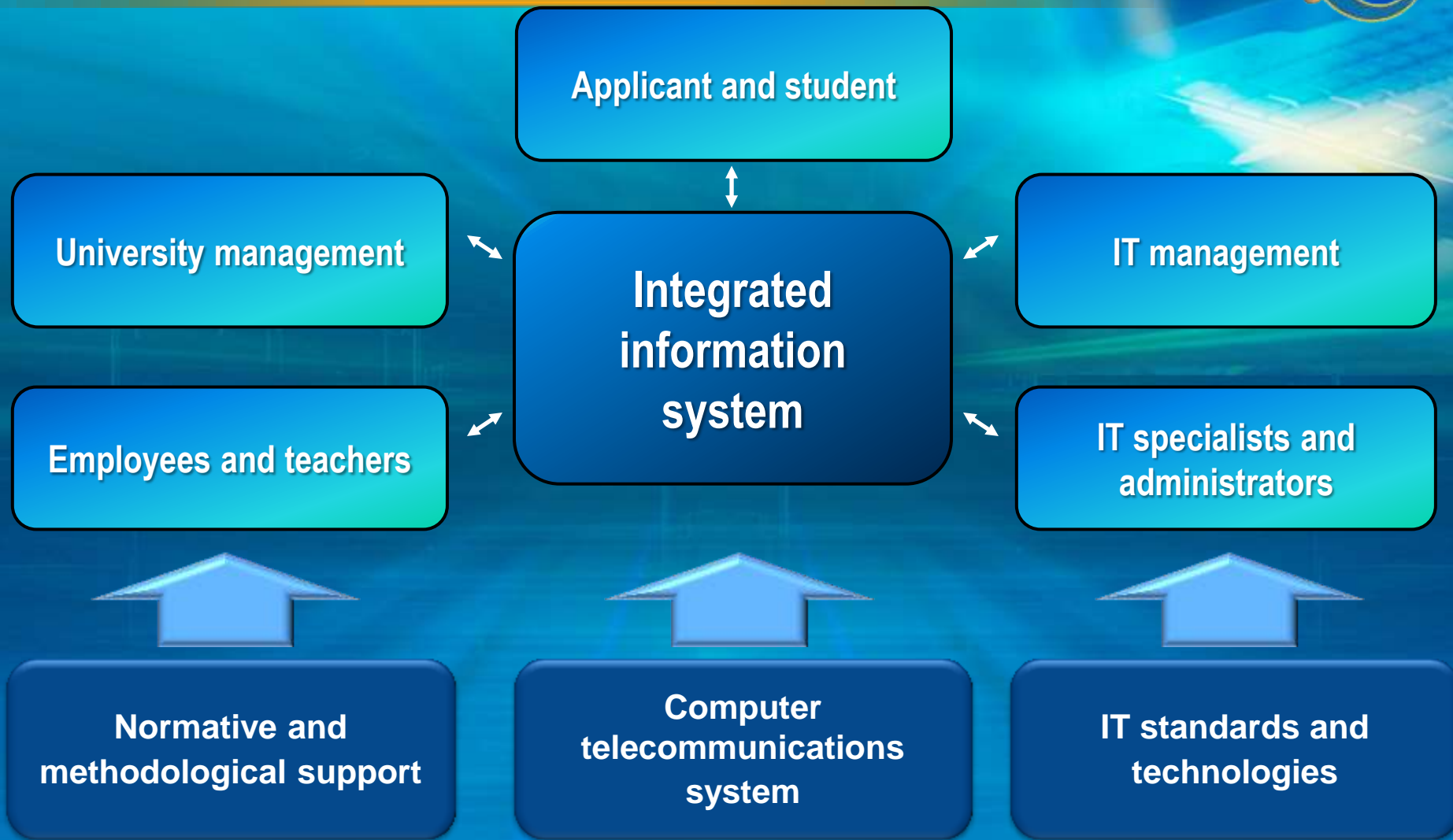
DEVELOPMENT, SUPPORT AND EVOLUTION OF INTEGRATED INFORMATION SYSTEM



UNIVERSITY AS CONTROL SYSTEM



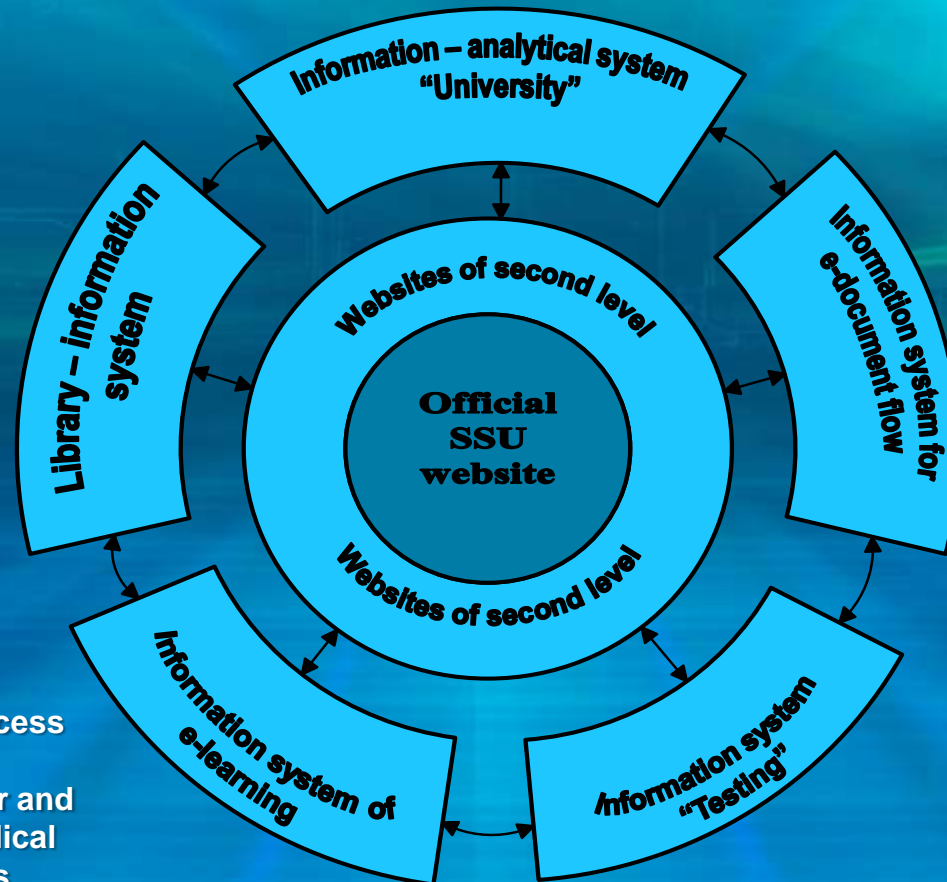
INTEGRATED INFORMATION SYSTEM



INTEGRATED INFORMATION SYSTEM



Support of management for
teaching and research activities



Support for library
management

Storage and search of
educational, methodical
and research literature

Support for learning process

Providing work of teacher and
student with the methodical
and learning materials,
simulators

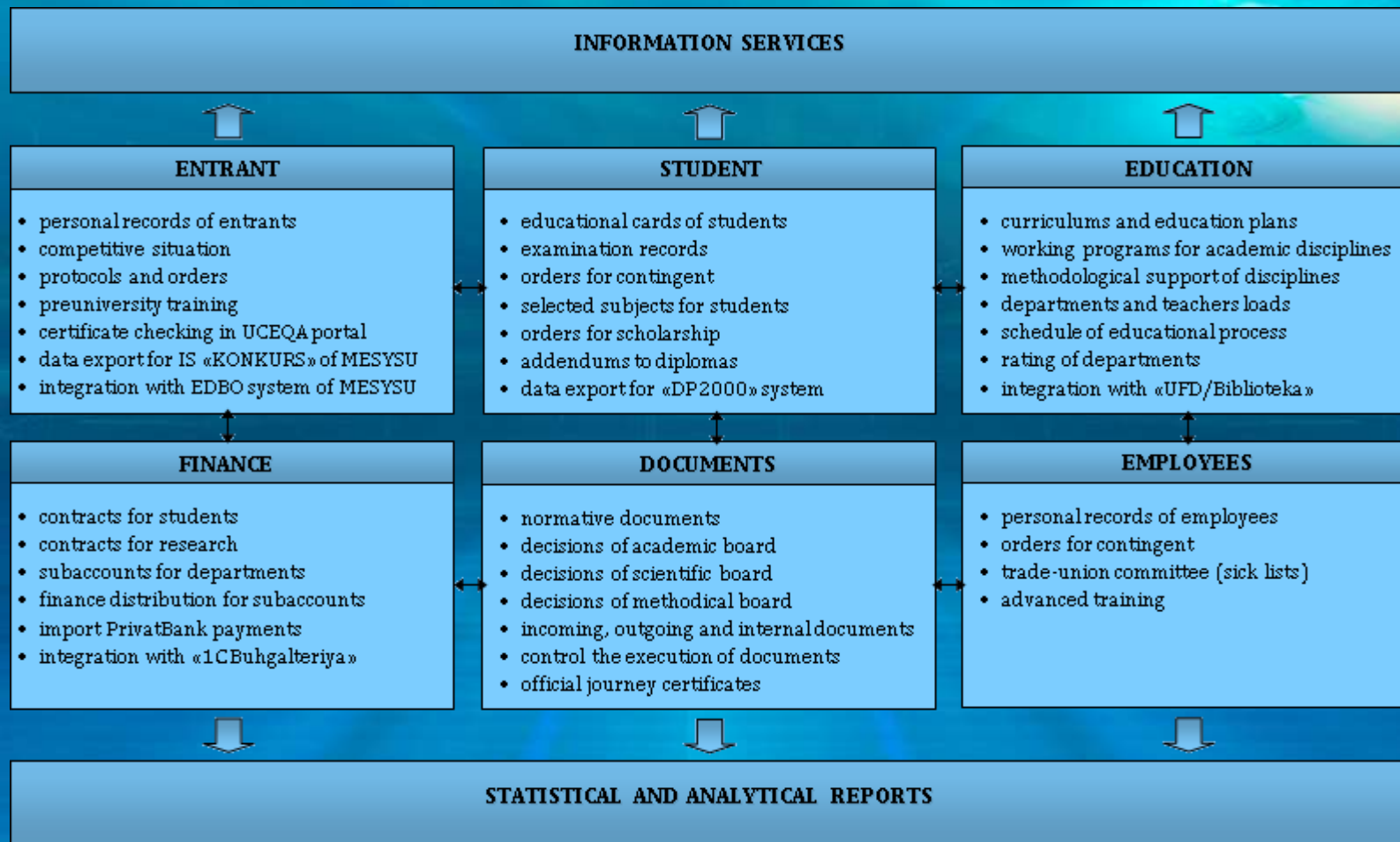
Support for electronic
documents flow and
communications

Documents storage

Support of process
knowledge checking of
applicants and
students

Tests storage

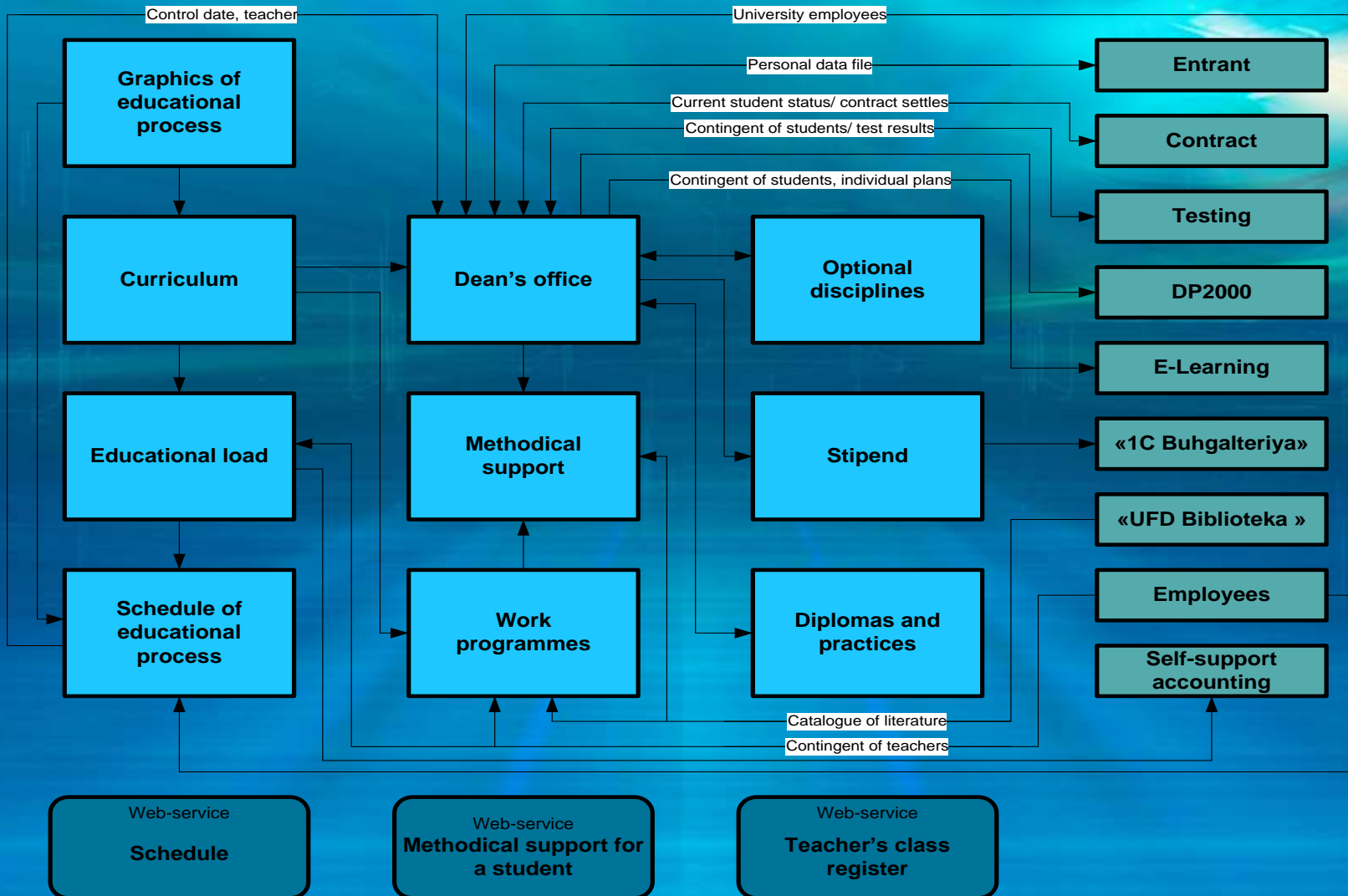
INFORMATION-ANALYTICAL SYSTEM «UNIVERSITY»



INFORMATION-ANALYTICAL SYSTEM «UNIVERSITY»



Complex subsystem «Educational process»



INFORMATION-ANALYTICAL SYSTEM «UNIVERSITY»



Management functions of complex subsystem «Educational process»

Management functions	Functionality of modules				
	Graphics of educational process	Curriculum	Dean's office	Optional disciplines	Stipend
Planning					
Analysis			<ul style="list-style-type: none"> - students contingent statistic; - contingent's movement statistic; - examinations results statistic; - academic disciplines success statistic. 	<ul style="list-style-type: none"> - form for the analysis of the students distribution for option disciplines. 	
	Sorting, searching and filtering (selection) data for certain conditions				
Checking		<ul style="list-style-type: none"> - control for the number of hours per week in module cycle; - visual control for the curricula totals. 	<ul style="list-style-type: none"> - control for order creation by success and contract payment rate; - control for information by curriculum and numbers of re-takes; - forms for visual control for students success. 	<ul style="list-style-type: none"> - control for number of students limits for option disciplines. 	<ul style="list-style-type: none"> - visual control for the totals of the order.
	authorization of users in the system, log for users actions				
Recording	<ul style="list-style-type: none"> - input, registration and saving of basic and work graphics; - automated generation of work graphics according to basic graphics; - generation of printing forms for basic, work and semester graphics and time budget. 	<ul style="list-style-type: none"> - input, registration and saving of basic and work curriculums; - automated generation of work curriculums according to basic curriculums and graphics; - generation of printing forms for basic, work and semester curriculums, department's loading. 	<ul style="list-style-type: none"> - input, registration and saving of study cards of students, success records, contingent orders; - automated generation of orders for transfer, expulsion, graduation; - automated generation of main and additional information about success; - generation of printing forms for orders, information from study cards of students, lists, addendums to diploma etc.; - data export to DP2000. 	<ul style="list-style-type: none"> - input, registration and saving of students applications and instructions ; - automated generation of instructions for students applications; - generation of printing form for instructions and students lists. 	<ul style="list-style-type: none"> - input, registration and saving for the appointment of scholarships, financial assistance and reward; - automated generation of orders for stipend; - generation of printing forms for orders; - export of orders to "1C accounting".
	operative messaging system				

INFORMATION-ANALYTICAL SYSTEM «UNIVERSITY»

Number of users – 350

Information systems of Ministry of education, science, youth and sports of Ukraine

Shostka Institute

Konotop Institute

SSU

Information systems of financial and controlling authorities

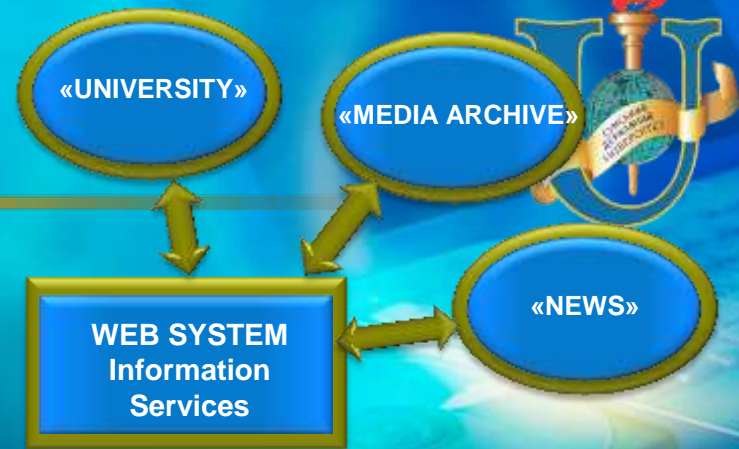
The collage features several overlapping windows from the 'UNIVERSITY' information-analytical system:

- Student List:** A table with columns for 'ІДП' (ID), 'ІМ' (Name), 'ПРІЗ' (Surname), 'ПЕД' (Pedagogue), 'ГРУП' (Group), 'СТАТУС' (Status), 'МІСЦ' (Place), and 'ОЦІНКА' (Grade). It lists students like 'Степанів С. В.', 'Степанів Д. О.', and 'Степанів В. І.'.
- Personal Data Form (Личное дело - 017-Т):** A form for student '017' registered on '04.07.2011'. It includes fields for 'Дата реєстрації', 'Серія аттестата', 'Дата вступу', 'Підприємство', 'Форма навчання', 'Спеціальність', 'Рівень підготовки', 'Місце навчання', 'Фамілія', 'Ім'я', 'Пічтовий', 'Дата народження', 'Місце народження', 'Громадянство', 'Національність', 'Пол', 'Владець курсів', 'Рівень', 'Державні мови', and 'Основа'. It also shows 'Курс 1' and 'Учеб. курс'.
- Course Schedule:** A grid showing 'Підприємство' (Company) and 'Вправа' (Lesson) for dates from 17.10.2011 to 03.10.2012. It lists various companies like 'Степанів А. І.', 'Степанів А. В.', and 'Степанів А. С.'.
- Academic Records:** A table with columns for 'Учебный год' (Academic year), 'Семестр' (Semester), 'Часть' (Part), 'Балл' (Grade), 'Дисциплина' (Discipline), 'Форма контроля' (Control form), 'Дата' (Date), and 'Оценки' (Grades). It shows records for 'Функциональный анализ' and 'Теория систем на нечетких подмножествах'.
- Registration Form:** A form for 'Регистрация' (Registration) with fields for 'Подразделение', 'Адрес проживания', 'Адрес регистрации', 'Срок обучения', 'Дата окончания обучения', 'Ф.И.О. студента', 'Группа', 'Срок обучения', 'Вид обучения', 'Специальность', 'Категория', and 'Курс'.
- Student Profile:** A profile for 'Степанів С. В.' born on '18.07.1999', with fields for 'Пол', 'Ім'я', 'Прізвище', 'Телефон', and 'Місце народження'.

INFORMATION SERVICES

Number of unique users – 30 000

- Service «APPLICANT'S PROFILE»
- Service «SCHEDULE»
- Service «RESEARCH CONTRACTS»
- Service «DOCUMENT TEMPLATES»
- Service «NORMATIVE BASE»
- Service «EDUCATION COST»
- Service «TELEPHONE DIRECTORY»
- Service «MEDIA ARCHIVE»
- Service «NEWS»



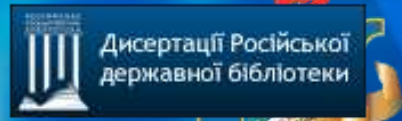
LIBRARY INFORMATION SYSTEM

Full electronic catalogue. Electronic library

Repository of scientific works

Access to more than 100 world databases of electronic resources

Free access to reading halls. Virtual reading halls

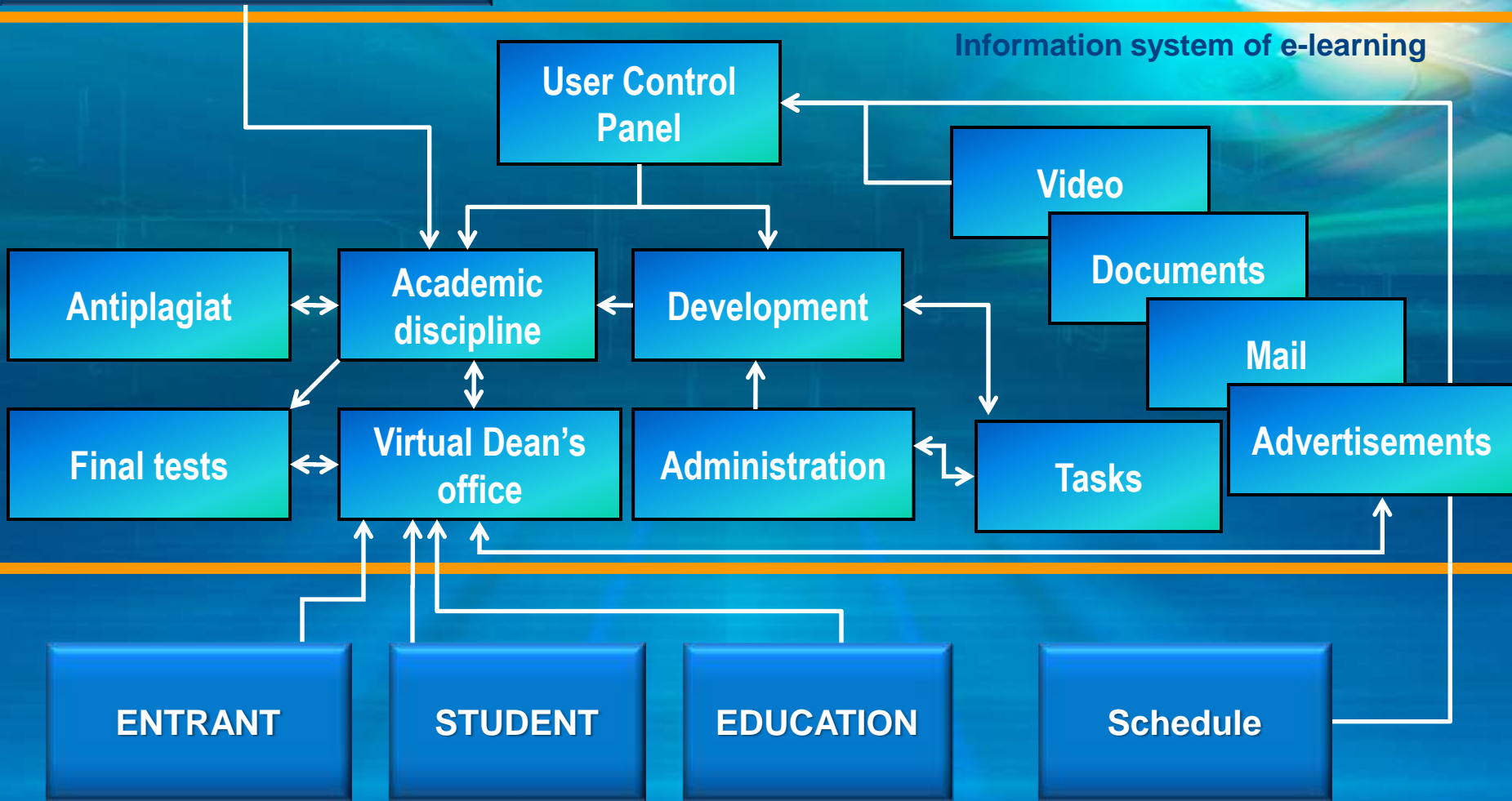


INFORMATION SYSTEM OF E-LEARNING



Library information system

Information system of e-learning



Information-analytical system «University»

INFORMATION SYSTEM OF E-LEARNING



230 tutors from 35 university departments teaches 2200 students using 350 e-courses

The image displays a collage of screenshots from an e-learning information system. The screenshots show various components of the system:

- Course Pages:** Screenshots of course listings and details, including course titles, descriptions, and navigation menus.
- Bug/Task/Feature Tracker:** A screenshot of a project management tool showing a list of tasks with columns for ID, Title, Priority, and Status. It indicates 303 open tasks, 18 in progress, and 15 closed.
- Video Conference:** A grid of video feeds showing multiple participants in a virtual classroom setting.
- Search Results:** A screenshot of a search results page for "кафедра Электроэнергетики", listing various topics and documents.
- Course Details:** A screenshot showing a course description and a list of documents available for download.

INFORMATION SYSTEM «TESTING»



- Flexible opportunity of creation tests with the adjustments of assessment criterions
- Providing of testing of applicants, students, specialists and teachers
- Centralized database of tests and results of testing
- Analysis of the results of the testing
- Printing of the necessary documents and reports

СУМЬСЬКИЙ ДЕРЖАВНИЙ УНІВЕРСИТЕТ
Протокол комп'ютерного тестування

Прізвище (ім'я, по батькові): Сидоренко Дмитро Миколайович
Підготовка: Інженерний факультет
Напрямок підготовки: Інженерія зв'язків
Фахово спрямування: технологія машинобудування
Форма навчання: денна
Курс: 1

Дисципліна: МАТЕМАТИКА
Варіант: № 072

1. Обчисліть $\left(\left(\frac{2}{3}\right)^{-1} - \left(\frac{4}{3}\right)^{-1}\right)^{-1} \cdot 3$
Відповідь: -4

2. Спростіть $\frac{b^2+2b-3}{b-1} - b$
Відповідь: 3

3. Спростіть вираз $\left(\frac{y+1}{y-1} - \frac{y}{y+1}\right) \cdot \frac{3y+1}{y^2+y}$

Контрольне тестування [Тестові завдання держспезу (46)]

Вопрос №96 0 0 00:00:56 Вопрос оценивается в 1.00 бал

Перевірити на керуваність систему, модель якої має вигляд

$$\begin{cases} \dot{x}(k+1) = Ax(k) + Bu(k) \\ y(k) = Cx(k) \end{cases}$$

де $A = \begin{pmatrix} 0 & 1 \\ -0.1 & -0.1 \end{pmatrix}$, $C = (-0.067 \quad -0.033)$,
визначивши значення відповідного критерію

$$\text{rang} \begin{pmatrix} 0 & 1 \\ -0.1 & -0.1 \\ 0.067 & 0.033 \end{pmatrix} = 2$$
$$\text{rang} \begin{pmatrix} 0 & 1 \\ 1 & -0.1 \end{pmatrix} = 2$$
$$\text{rang} \begin{pmatrix} 0 & 1 \\ -0.1 & -0.1 \end{pmatrix} = 2$$

Далше Сідати 00:01:13

© Лабораторія автоматизованих систем, 2004

Редактор - [Задання]

Тест № 001

- Вопрос № 001-001
- Вопрос № 001-002
- Вопрос № 001-003
- Вопрос № 001-004
- Вопрос № 001-005
- Вопрос № 001-006
- Вопрос № 001-007
- Вопрос № 002-001
- Вопрос № 002-002
- Вопрос № 002-003
- Вопрос № 002-004
- Вопрос № 002-005
- Вопрос № 002-006
- Вопрос № 002-007
- Вопрос № 002-008
- Вопрос № 003-001
- Вопрос № 003-002
- Вопрос № 003-003
- Вопрос № 003-004
- Вопрос № 003-005

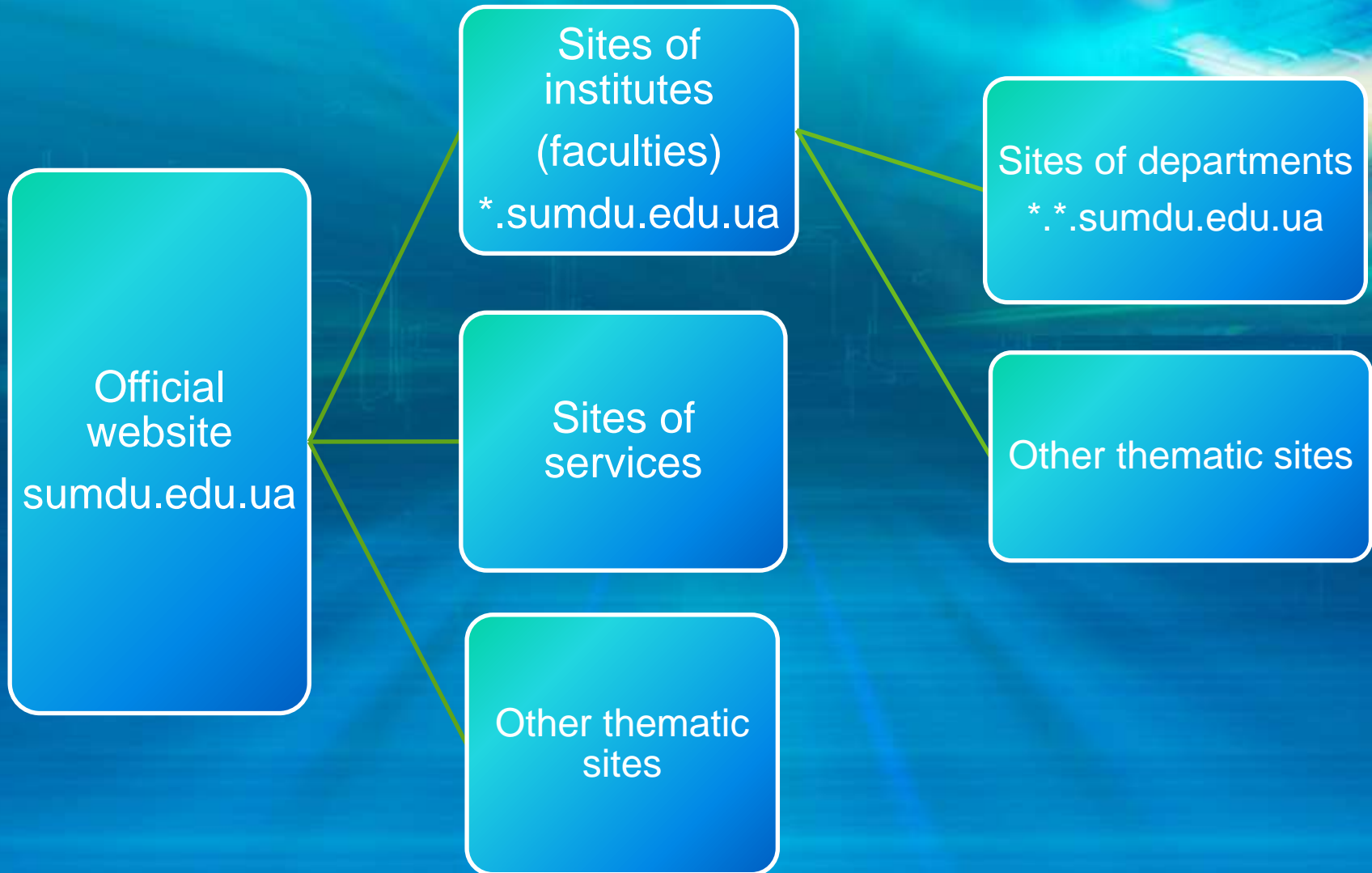
Вариант: 2
Номер: 7
Вид: вибр варіанту відповідей
Відповідь: 0
Стоп-критерій: 1
Время: 00:00:00
Содержание: `string(При якому значенні параметра a System(a^2*x_1+3*x_2+2*a*x_3=0, a^4*x_1-x_2`
Изображение: При якому значенні параметра a система рівнянь $\begin{cases} a^2x_1 + 3x_2 + 2x_3 = 0 \\ ax_1 - x_2 + x_3 = 0 \\ 3x_1 + x_2 + 4x_3 = 0 \end{cases}$
Дополнительный контроль:
 Случайный выбор
 Перемешать ответы

OK Отмена

UNIVERSITY WEB-SYSTEM



Structure of university websites

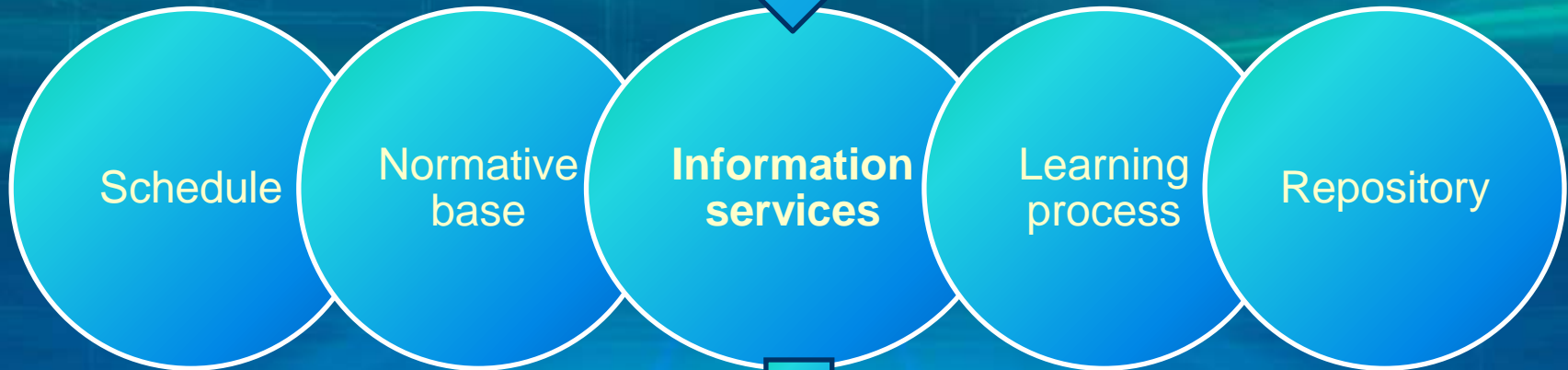


ROLE OF UNIVERSITY WEB-SYSTEM



Integrating function

Databases of information systems
(data sources)



Displaying of information on websites
(data recipients)

ROLE OF UNIVERSITY WEB-SYSTEM



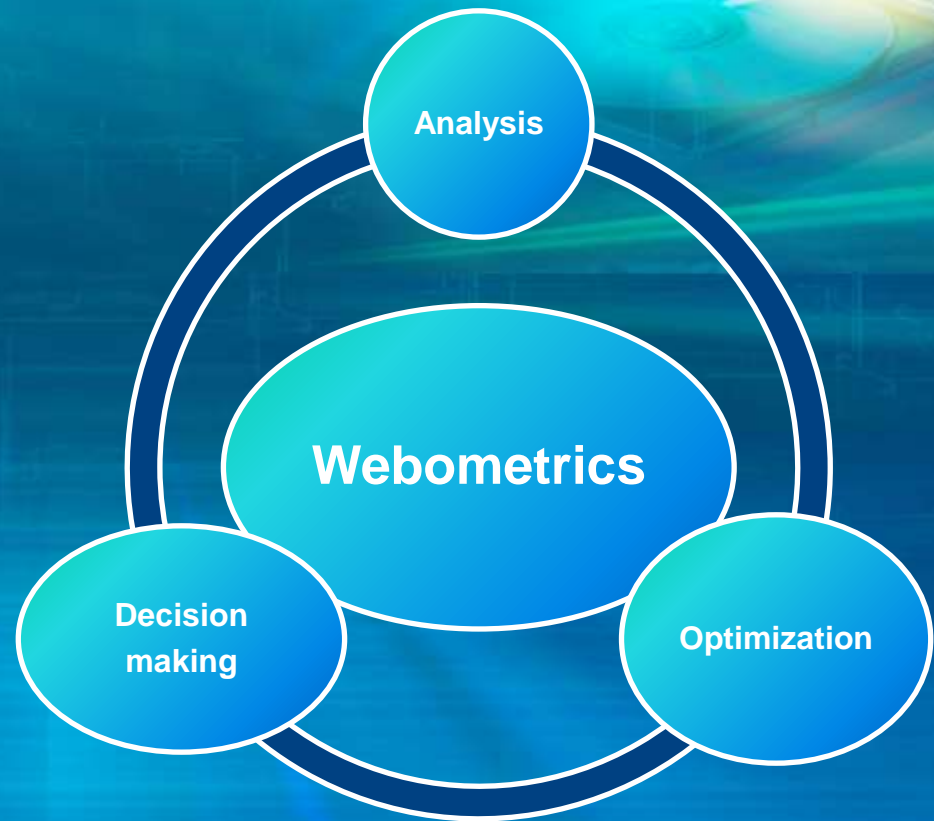
Feedback source
(effect of publicity)

Tool for management
decision-making

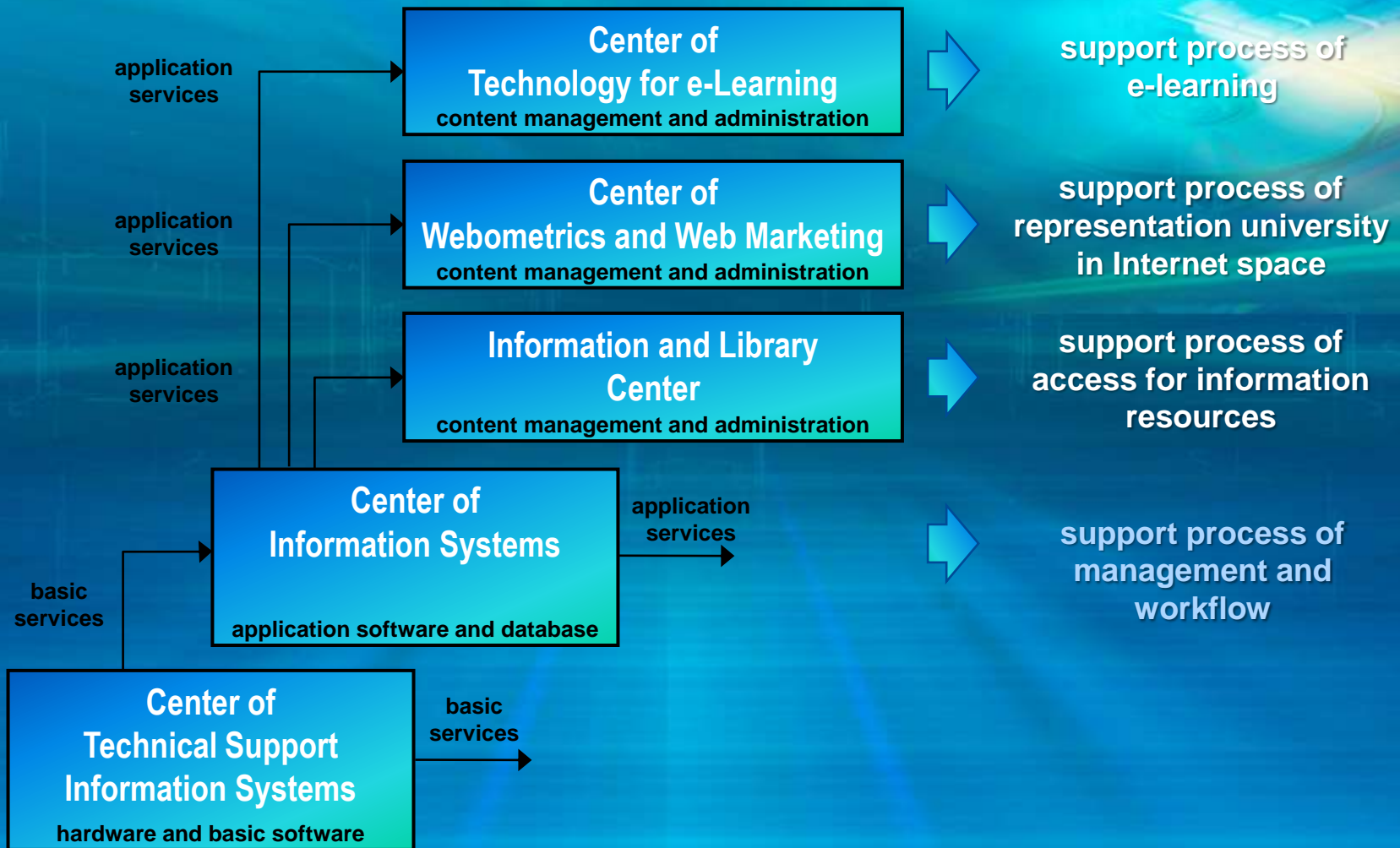
Socially useful information



World community feedback



IT DEPARTMENTS FOR DEVELOPMENT AND SUPPORT OF INTEGRATED INFORMATION SYSTEM



INTEGRATED INFORMATION SYSTEM OF UNIVERSITY



In frameworks of the project «Integrated University Management System: EU Experience On NIS Countries' Ground» Sumy State University proposes to take the implementation of the following tasks:

- development concept and architecture creation integrated information university management system
- development conceptual information and functional model university
- development structure (software, information and methodological support) of the information-analytical system providing support of university management process and information services associated with it
- development structure (software, information and methodological support) of the web system, the public component of integrated information system is the feedback source and the tool of increasing of the university business processes quality