

# ***Innovation and Knowledge Management towards eStudent Information System - iKnow***

**University “Sts. Cyril & Methodius”  
Fac. of Information Sciences and  
Computer Engineering**

# Server infrastructure and security

- The first server is used as SQL server with Microsoft SQL Server installed
- The second is used as an application server. The system is upgraded by installing 4 virtual Windows servers using VMware. Both servers have an intel xeon e5630 2.56 GHz cpu and 16GB of RAM, 1 TB storage.
- A digital certificate was installed to encrypt all the communication

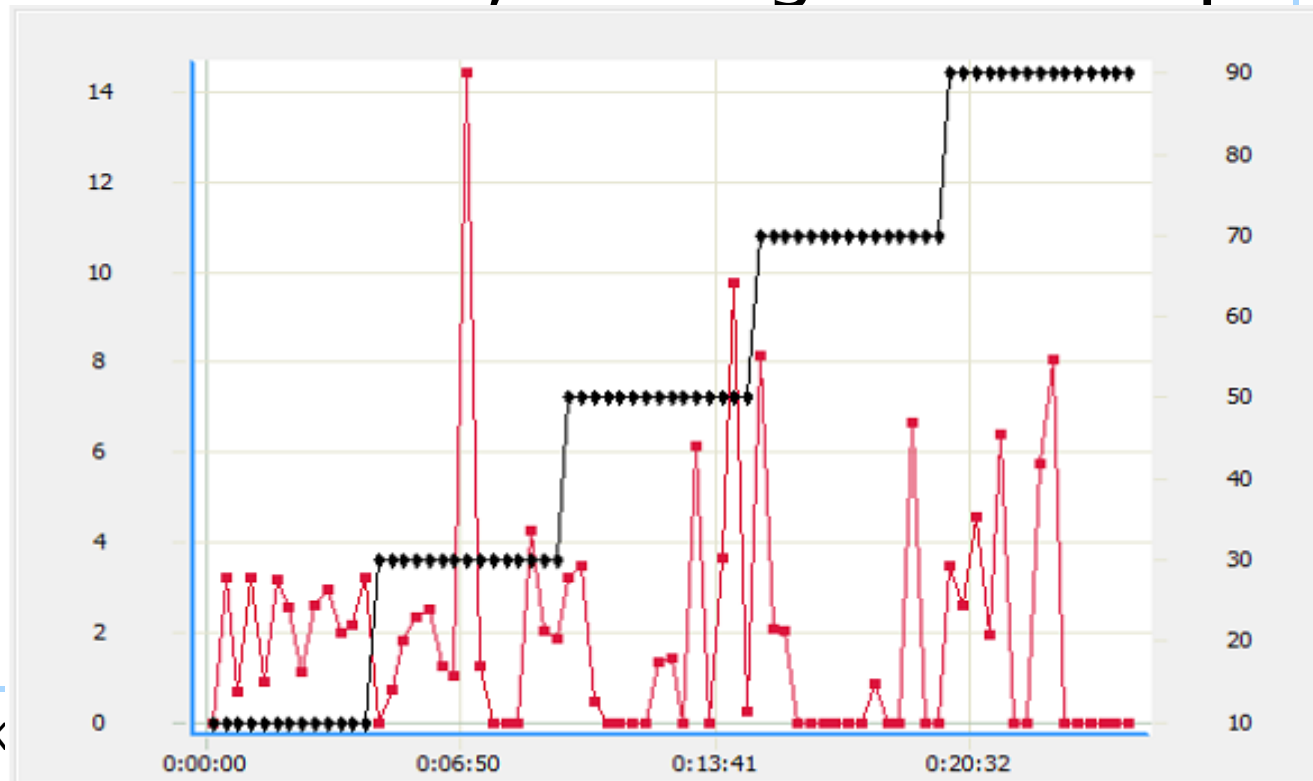
# Benefits from the MVP pattern

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- Software bugs were relatively low in number.
- The bugs were rather easy to correct.
- Increased productivity due to code reuse.
- The project development speed increased
- Easily integrating different interfaces.
- One of the drawbacks of using the MVP is the added complexity.
- Another drawback of the pattern is the longer

# Performance tests

- Tool capable of simulating multiple users (WAPT 7.1 <http://www.softlogica.com/>). The test lasted for 25 minutes, starting from 10 up to 90 users.



# Usage statistics

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- 691 students enrolled in September 2011
- 6086 students enrolled in September 2012 (9159 applied)
- 5516 courses migrated in the system.
- 19387 exam applications made by students
- 49299 exam grades were migrated / entered
- 9220 semester enrolments were migrated
- 43713 course enrolments were migrated

# User interface

## Agile development :

- changing requirements
- user satisfaction.

## Users demanded features:

- grouping of functionalities on fewer forms
- Screen size and resolution (conflicting)
- Simplicity and impossible to make an error
- Automation of processes

fin113001/2011 Александар Алексовски Редовен | Студии за примена на е-технологии ЕКТС 12,00 просек(7,50)

Лични податоци | Запишани семестри | Предмети | Пријави | Испити | Курсеви | Дипломска | Плаќања на семестри | Трансакции | Емаил порака | Документи

Известувања  
 Планер  
 Студенти  
 Преглед  
 Нов студент  
 Пријави  
 Оценки(Индекс)  
 Оценки(Пријавени)  
 Оценки(Формула)  
 Потписи  
 Соопштенја  
 Групи  
 Распределба  
 Оценки(Импорт)  
 Студии  
 Распореди  
 Извештаи

Внесете коментар за невалидноста на предметите или кредитите

Промени

Летен (2011/2012) | Статус: валиден | Кредити: 30,00 / 33 | За плаќање: 6150,00 | Платено: 6150,00

#	Предмет	Семестар	Кредити	Статус	Потпис	Група	Професор
1	Архитектура и организација на компјутери	2	6,00	Зад.		Група 4	Великов Горан
2	Бизнис и менаџмент системи	2	6,00	Зад.		Изберете	Изберете
3	Дискретна математика 2	2	6,00	Зад.		Група 4	Михова Марија
4	Напреден развој на софтвер	2	6,00	Зад.		Група 4	Чорбев Иван
5	Веб дизајн	2	6,00	Изб.		Група 4	Арменски Гоце

Задолжителни:  
 Компјутерски компоненти (2 сем, 6,00 кр.)  
 Бази на податоци (4 сем, 6,00 кр.)  
 Оперативни системи (4 сем, 6,00 кр.)  
 Деловна пракса (8 сем, 600,00 кр.)  
 Дипломска работа (8 сем, 600,00 кр.)

Александар Алексовски Редовен | Студии за примена на е-технологии ЕКТС 12,00 просек(7,50)

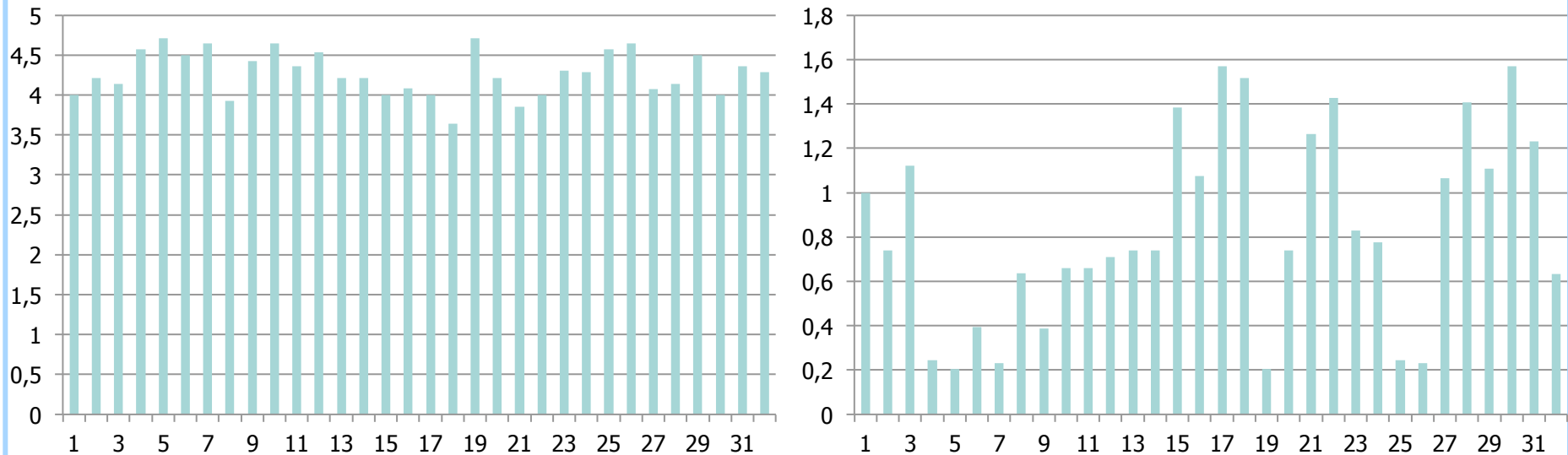
Семестри | Предмети | Пријави | Испити | Курсеви | Дипломска | Плаќања на семестри | Трансакции | Емаил порака | Документи

Изберете семестар | Студии за примена на е-техн | Државна Квота-Редовен (20 | Редовен | Вонреден | Документи | Забелешка

#	Семестар	Насока	Квота	Забелешка	Студ.Ком.	Сум
1	Летен(2011/2012)	ПЕТ(2011)	Државна Квота-Редовен(2010)			6.150
2	Зимски(2011/2012)	ПЕТ(2011)	Државна Квота-Редовен(2010)			6.150,00

#	Код	Предмет	Потпис
1	8101	Вовед во Интернет	Добива
2	1100	Концепти за развој на софтвер	Не добива
3	1101	Основи на софтверско инженерство	Добива
4	1102	Дискретна математика 1	Добива
5	1103	Професионални вештини	Добива

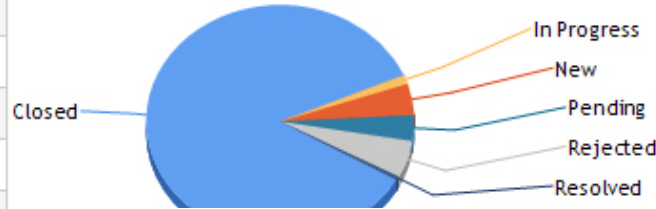
# User interface evaluation



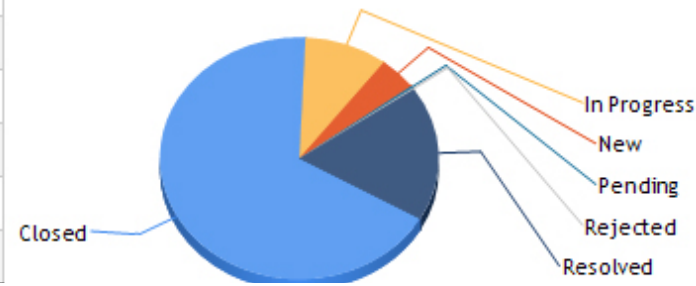
- a) Average grades given by the users (15 responded) in the questionnaire,
- b) Variance of average grades given by the users in the questionnaire

# Evaluation of the software implementation

Status	Total
Closed	333
In Progress	5
New	17
Pending	14
Rejected	20
Resolved	2
<b>TOTAL</b>	<b>391</b>



Status	Total
Closed	774
In Progress	111
New	51
Pending	4
Rejected	2
Resolved	207

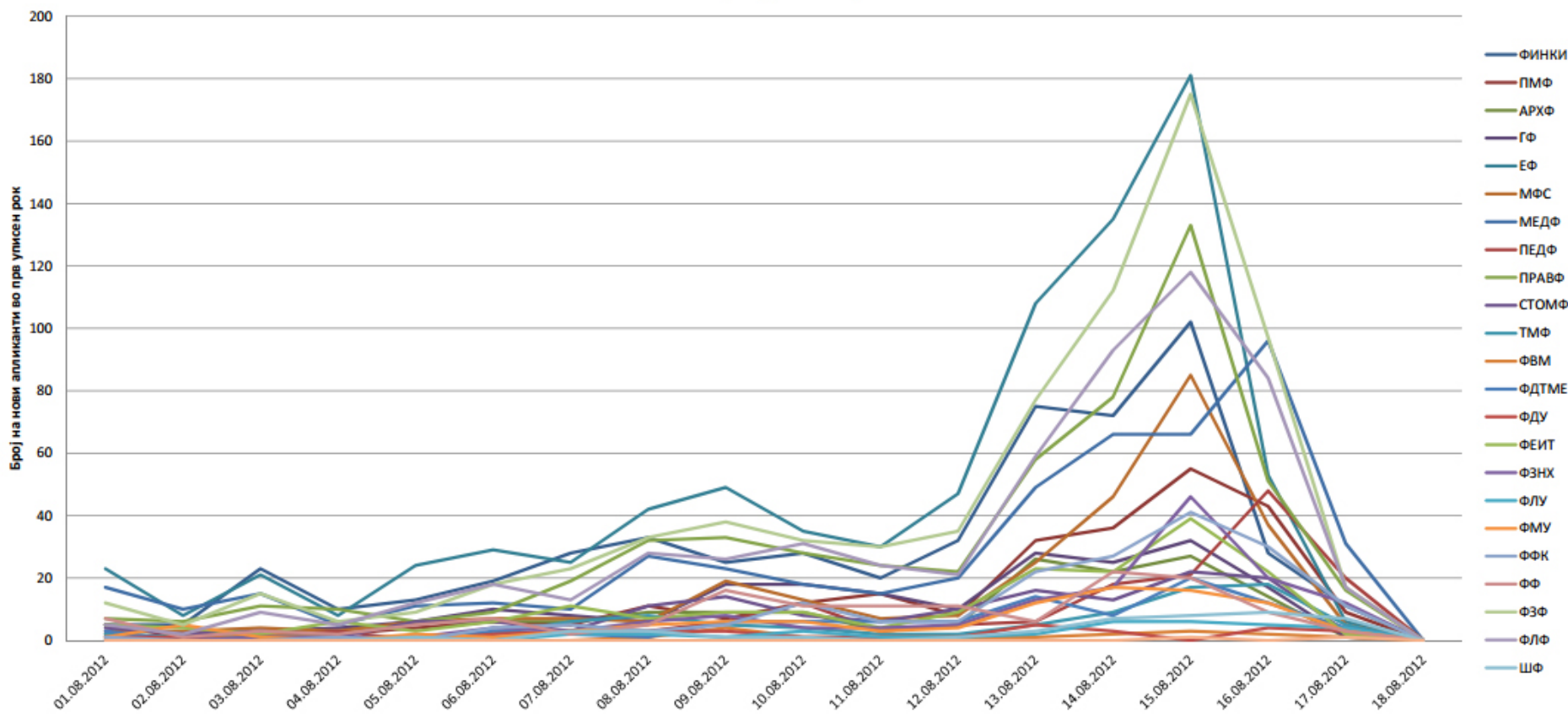


- Bug statistics of the Enrollment component
- Bug statistics of the Enrollment component
- Enrollment training video seen 803 times on the Youtube channel



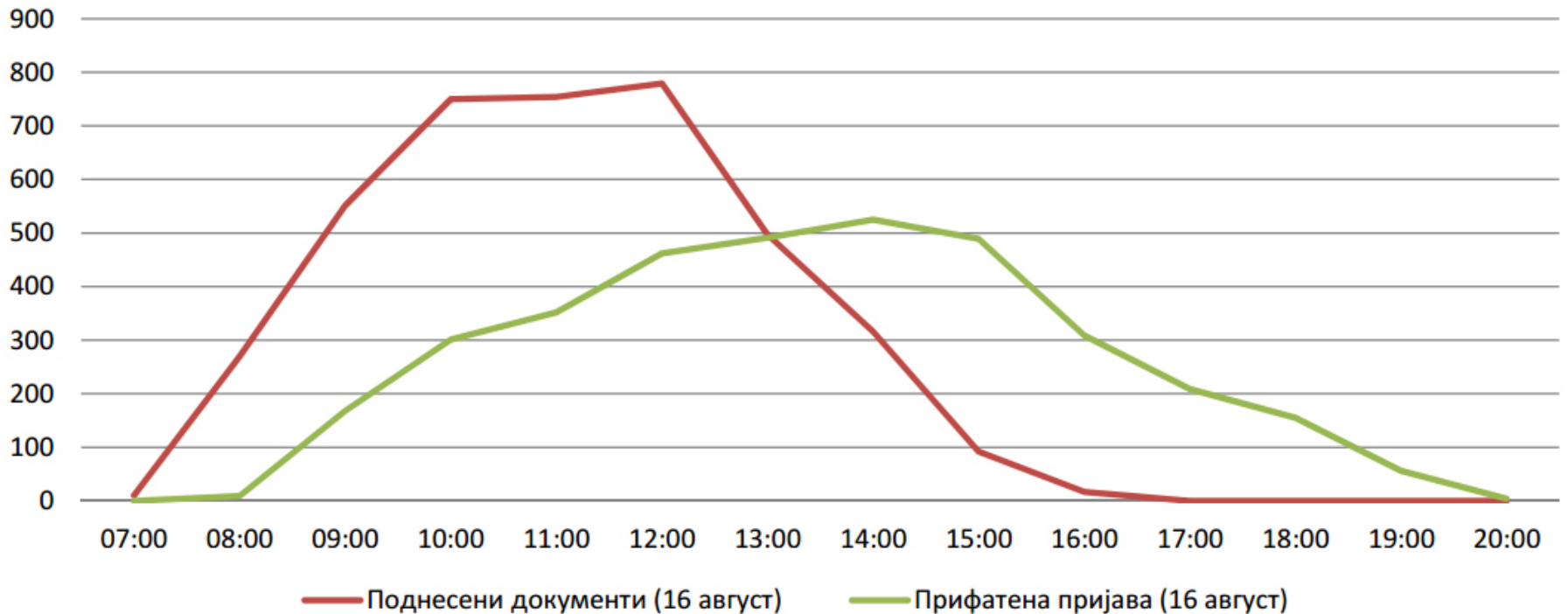
# Overview of new enrollments applicants per day in August

Преглед на нови апликанти по денови во месец август  
во прв уписен рок



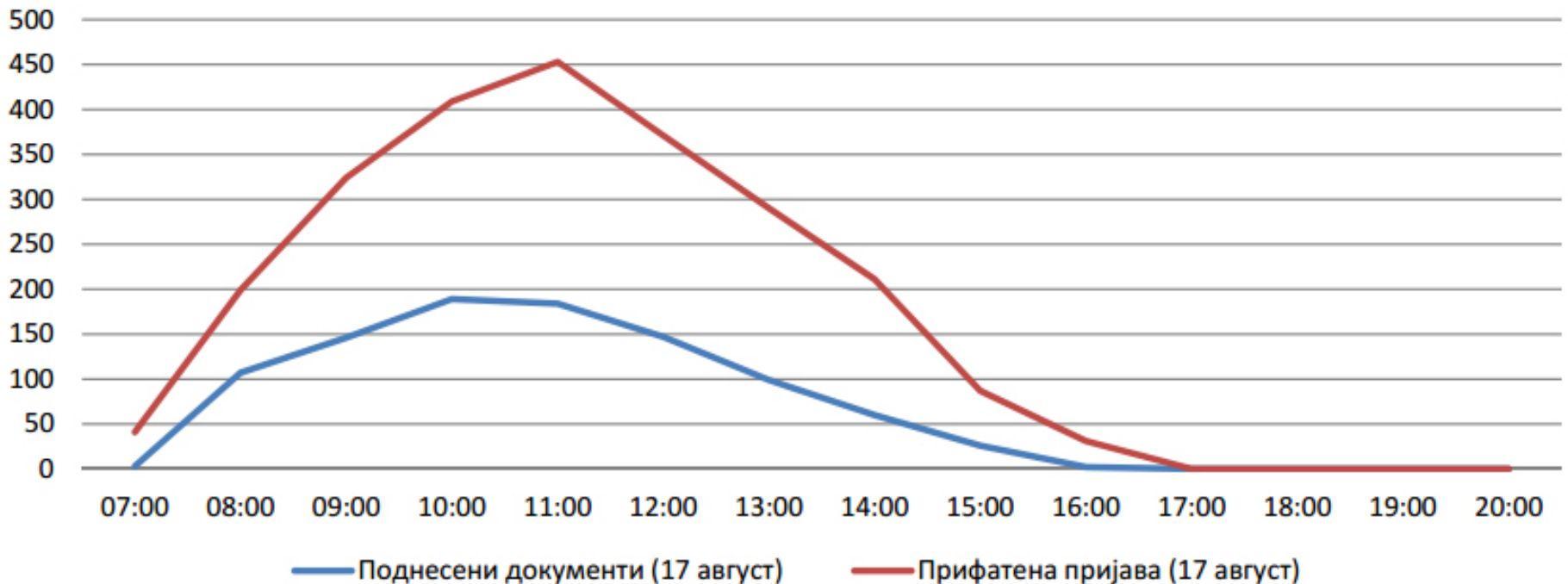
# “Deposited documents” and “Accepted applications” status changes during August 16th

Број на кандидати со статус „Поднесени документи“ и „Прифатена пријава“ на 16 август по часови (прв ден од прв уписан рок)



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# Questionnaire(1)– answers 1,2,3,4,5

- **Accessibility**

- How do you judge the information about the launch and the training you received?
- How do you access the process of registration?
- Does your browser display all information correctly?
- Is site load time appropriate to content and response?

- **Layout**

- Text-to-background contrast
- Is the font size and style easy to read?
- Does the site have a consistent look and feel?
- If you have a disability regarding your eyesight: Is the content readable?
- Is the label location and format consistent?

- **Navigation**

- Are the major parts/menus of the site directly accessible from the main page
- Are the navigation labels clear and descriptive?
- Is the workflow navigation consistent and easy to identify?
- Is the respective location within the process (site) transparent?
- Is the site search easy to access?
- Is the exit point clear on each page?
- Does it require minimal steps in sequential menu selection

# Questionnaire(2)– answers 1,2,3,4,5

- ***Exception and status handling***

- Are the messages regarding status clear and descriptive?
- Are the messages regarding exceptions/errors clear and descriptive?
- Position of messages on screen is good

- ***User guidelines and online help***

- Is the site designed to require minimal help and instructions?
- Is the help and instruction information easily accessible?
- Is there an easy channel available to communicate with an administrator?

- ***LEARNING***

- Easy to learn to operate the system
- Easy to explore new features by trial and error
- Easy to remember names and use of commands

# Questionnaire(3)– answers 1,2,3,4,5

- **Quality and structure of information**
- ***Content and Efficiency (refers to all information i.e. field explanations, order of fields)***
  - Is the content understandable?
  - Is the content well structured and correlates to your requirements?
  - How do you evaluate the support of the system?
  - Do you observe an increase in efficiency?
  - Does the system provide a sufficient number and quality of reports?
  - It is easy to use.
  - What is your overall evaluation of the system?
  - Do you have any further comments?

# The customization is ongoing

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- Yet more user requests
  - Two-semester courses
  - Changes in the enrollment procedures
  - Reporting
  - Live and changing system