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PHARMACY EDUCATION IN NEW EU COUNTRIES

PEEP VESKI

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ESTONIA

Barcelona 2006



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The main aim of the pharmacy studies

To prepare competent specialists

- own country
- European dimension

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EDUCATIONAL OUTCOME SHOULD REFLECT THE NEEDS OF THE SOCIETY

- Pharmacy policy**
- Present situation**
- Traditions**

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- Charles University in Prague 1348
the first university in the Middle Europe
- University of Krakow 1364
- University of Malta 1592
the second University in the Northern Europe
- University of Tartu 1632
- University of Trnava 1635

At the end of the 18th century and at the beginning of the 19th century, in these countries pharmacy was taught in independent faculties or chairs



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In the new EU countries, the development of pharmacy curricula started at the same time – at the beginning of the 1990`s

They should be similar

Their common part should be easily found

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The aims of the present study

- To compare the pharmacy curricula of the new EU countries
- To find out whether it is possible to define a core curriculum from analysed curricula that would ensure up-to-date knowledge for successful action in the different fields of pharmacy

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- Kaunas University of Medicine
- Jagiellonian University of Krakow
- K. Marcinkowsky University of Medical Sciences in Poznan
- Charles University in Hradec Kralove
- Comenius University in Bratislava
- Szeged University
- University of Latvia
- University of Tartu
- University of Malta
- University of Ljubljana

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Length of Curriculum

The length of basic course for training pharmacists – 5 years

In Latvia two-tier curriculum

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Total number of contact hours

Recommendations of the Advisory
Committee: “.....at least 3000 hours”

The total number of contact hours varies
between 3200 and 4000

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Requirements of graduation

- **Research project** (diploma work, master thesis..) in all the curricula

Proportion: 4% in Bratislava.....14% in Kaunas

- **Final exam(s)/State exam(s):**

- Krakow, Poznan, Latvia, – (-)
- Complex final exam –Kaunas, Tartu, Hungary
- Final exams during training process – Bratislava, Hradec Kralove
- **Pharmacology and pharmacotherapy, pharmaceutical technology, pharmaceutical chemistry, social pharmacy; pharmacognosy**
(not everywhere)
- **Practical State Exam** – Hungary

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In-service training

The in-service training is organised in different ways

The total duration varies from 20 to 28 weeks

In Kaunas, the specification is clear in the curriculum

In Hradec Kralove it is divided into 6 parts

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Subject areas

Advisory Committee on Pharmaceutical Training
(XV/E/8341/5/93-EN)

- Chemical subjects
- Physics/mathematics/computing/statistics
- Biology/biochemistry/pharmacognosy
- Pharmaceutical technology, medicinal products
- Basic medical subjects/pharmacology/toxicology
- Social aspects of pharmacy/law/economics/public health

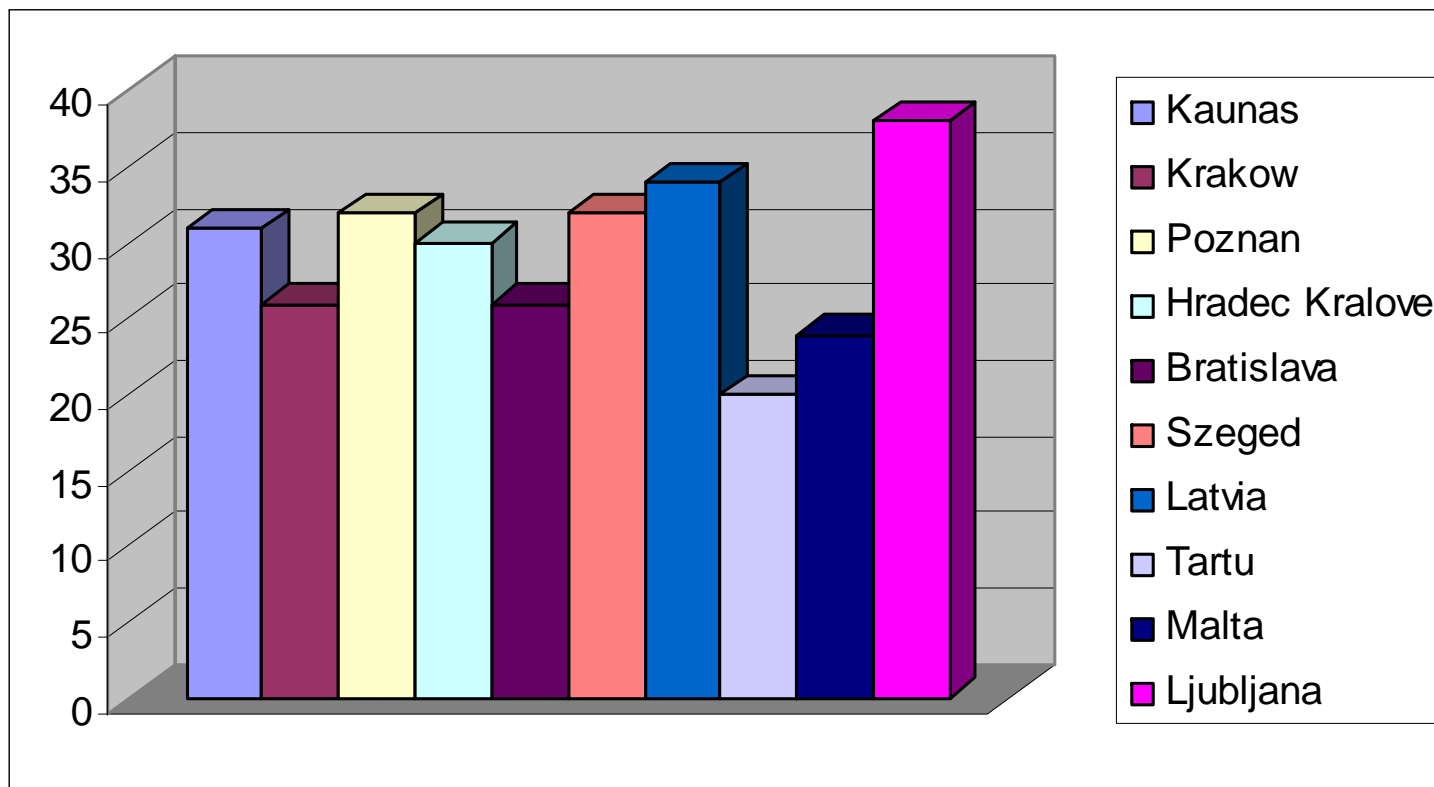
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Chemical subjects

29% of obligatory subjects on average

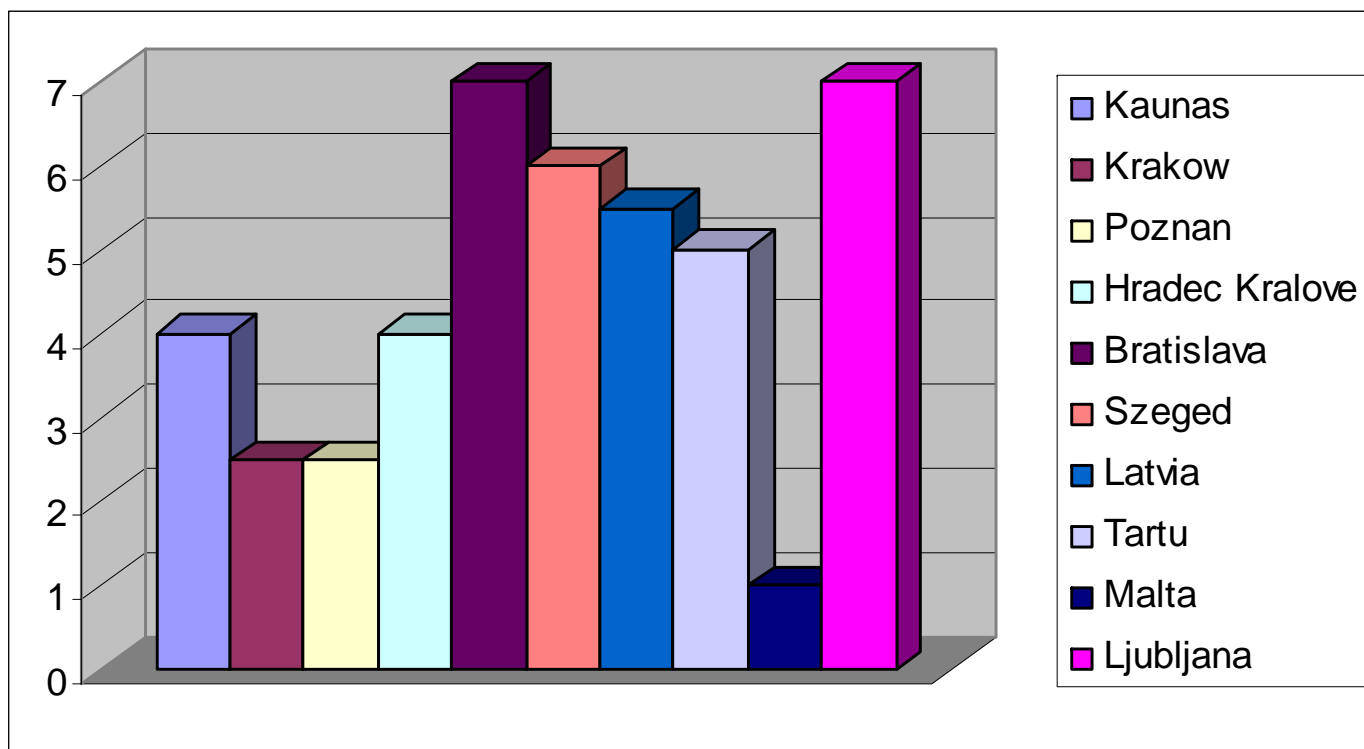


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Physics/mathematics/computing/statistic 4.5% of obligatory subjects on average

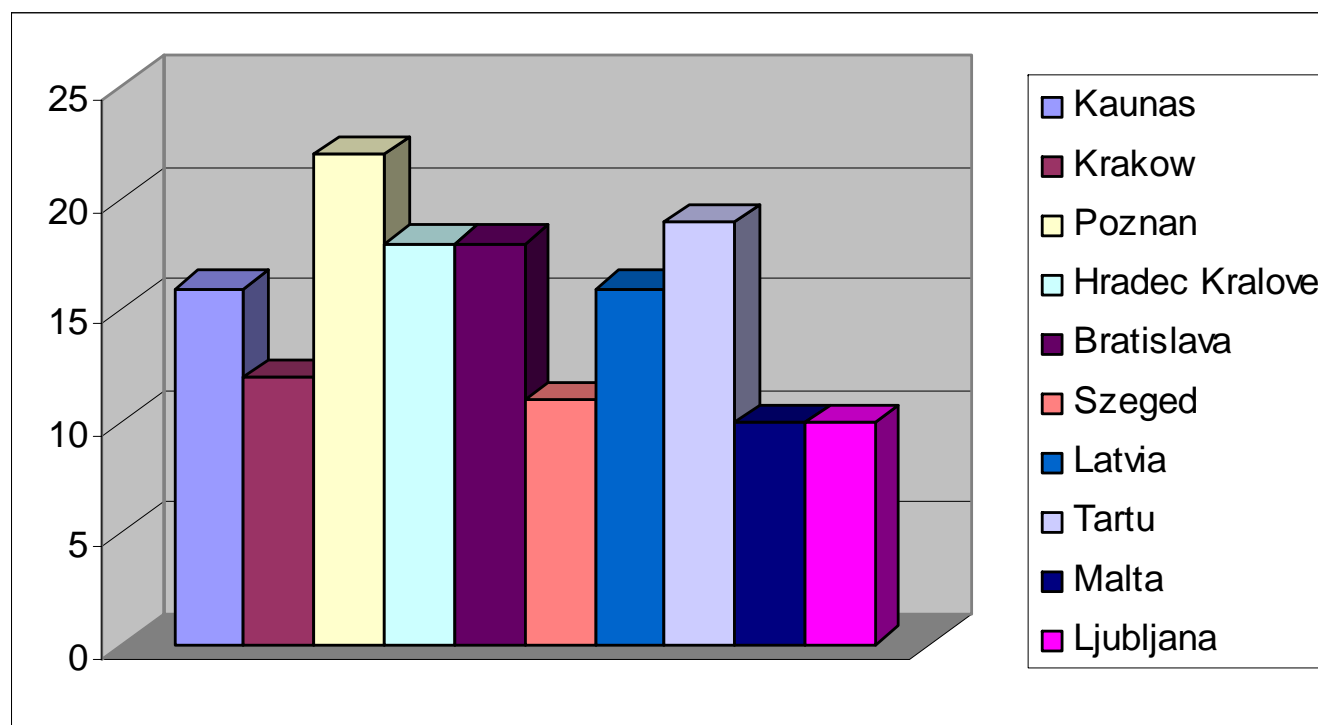


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Biology/biochemistry/pharmacognosy... 17% of obligatory subjects on average



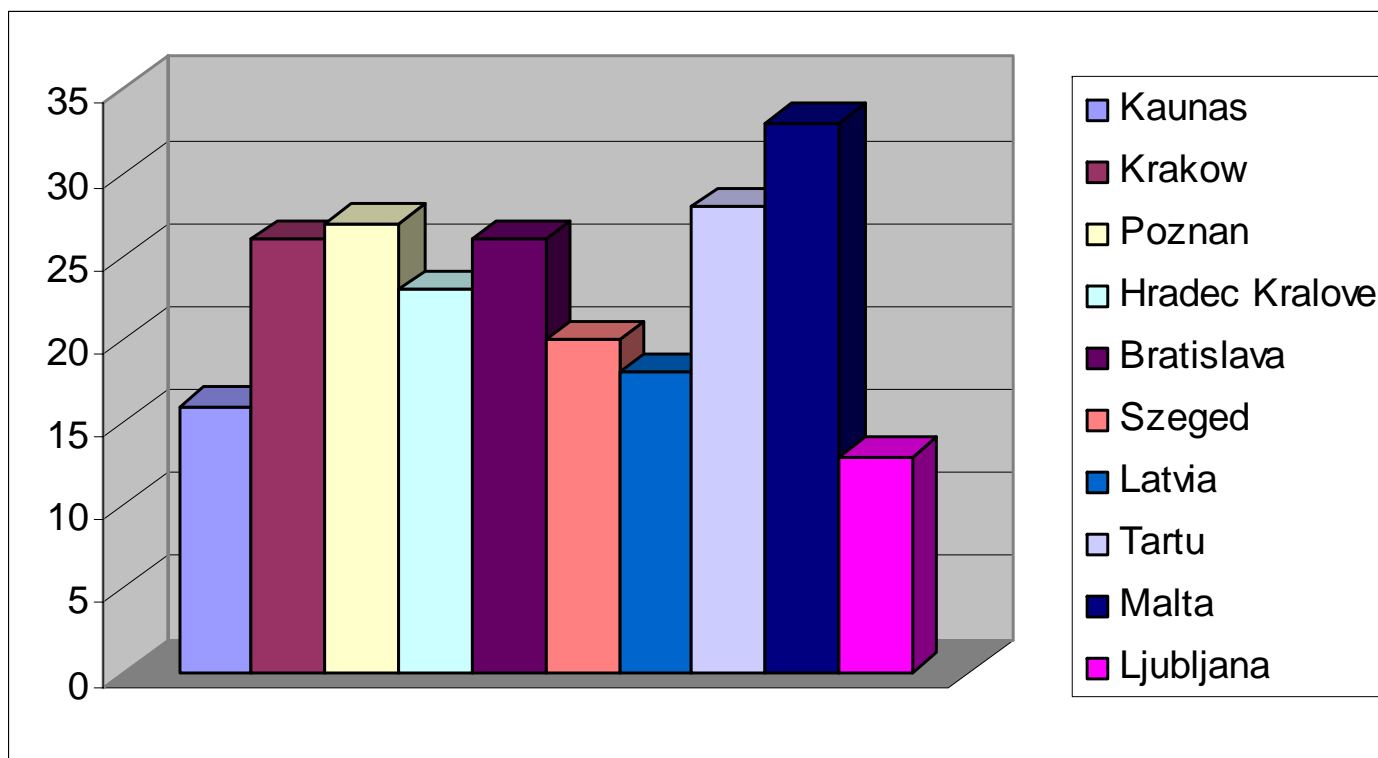
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Basic medical subjects

23% of obligatory subjects on average



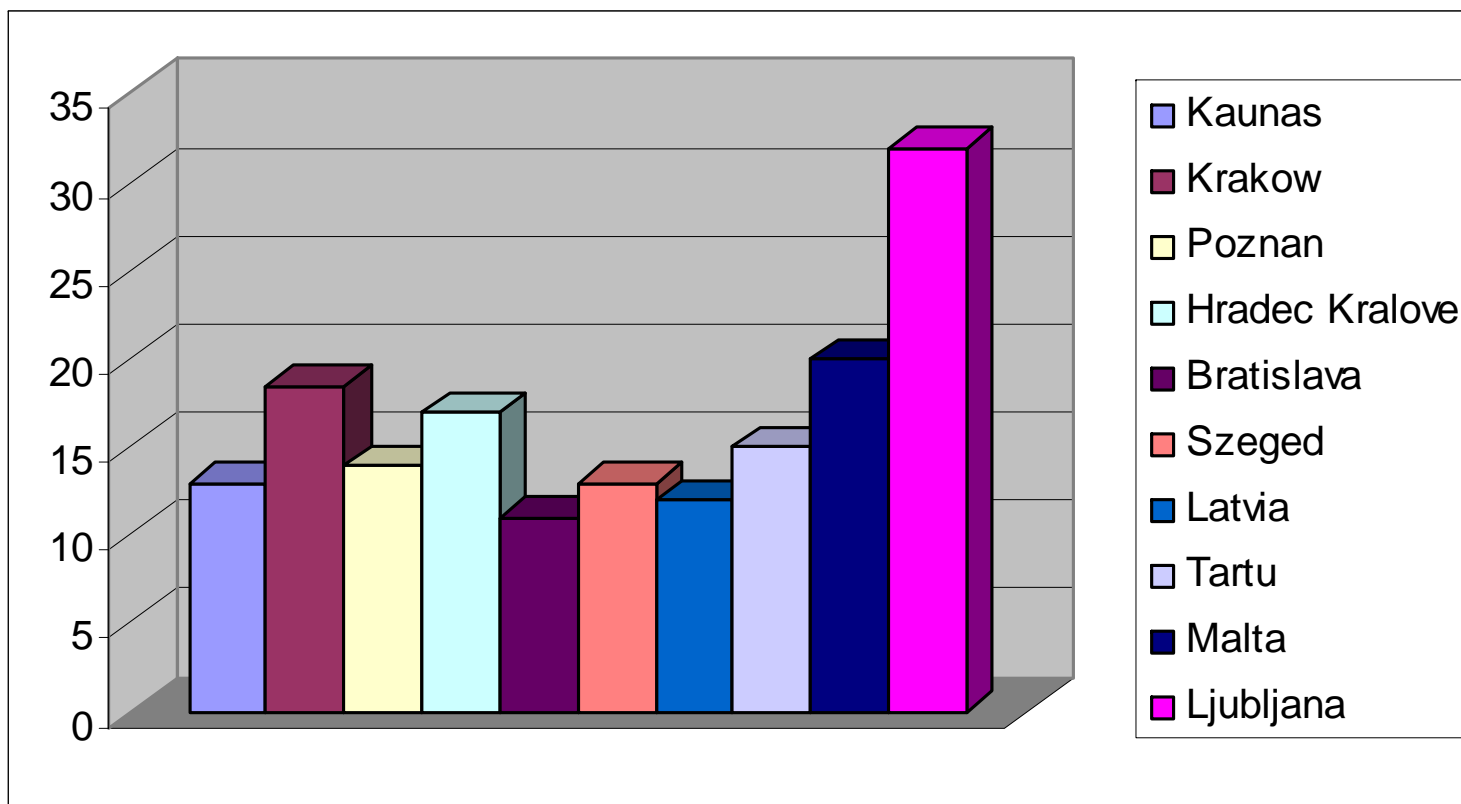
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Pharmaceutical technology

14% of obligatory subjects on average



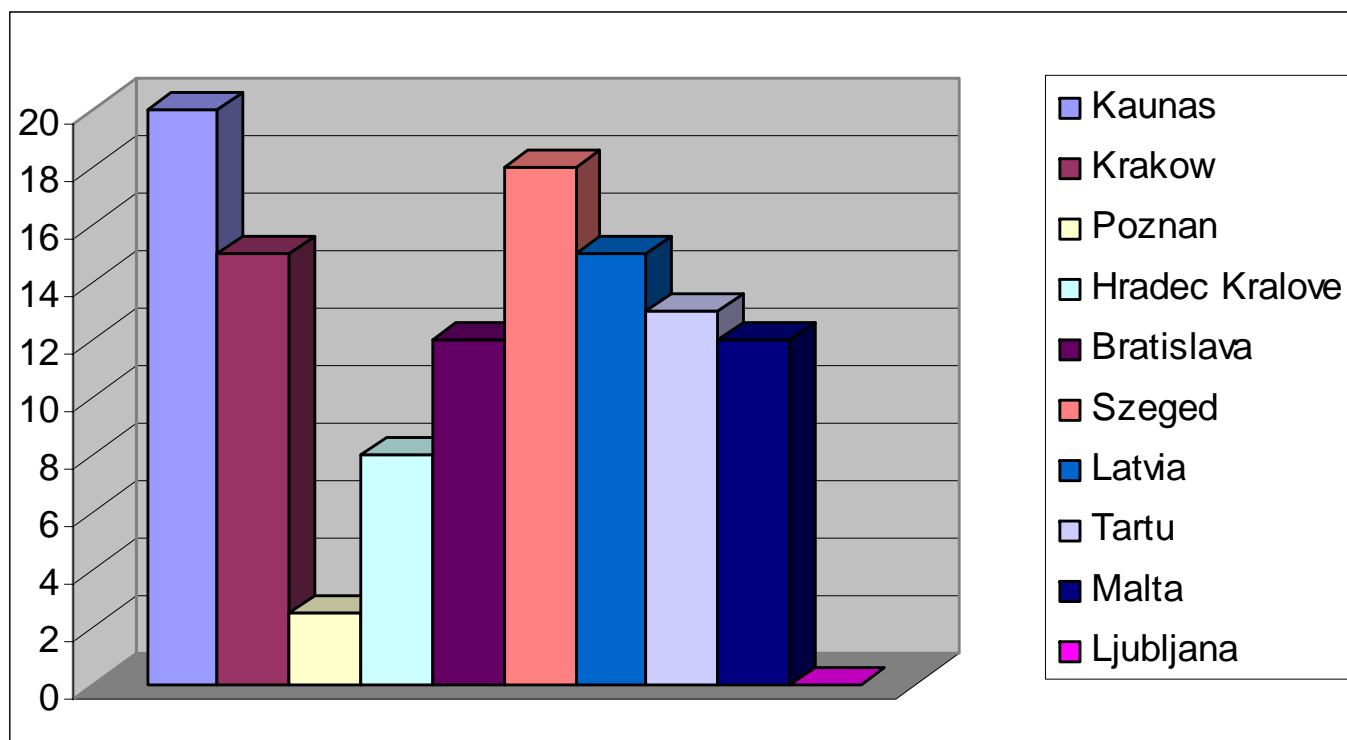
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Social aspects of pharmacy/law/economics...

12.5% of obligatory subjects on average



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Chemistry *versus* Basic Medicine

Kaunas	31	16	1,9
Krakow	26	26	1,0
Poznan	32	27	1,2
Hradec Kralove	30	23	1,3
Bratislava	26	26	1,0
Szeged	32	20	1,6
Latvia	34	18	1,9
Tartu	20	28	0,7
Malta	24	33	0,7
Ljubljana	38	13	2,9

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Proportion between theoretical and practical studies

It can be claimed that in the analysed curricula remarkable attention is paid to the practical studies (laboratory works)

In the curriculum of Tartu, 40% of the whole audithory work is covered with laboratory works

In other curricula the proportion is approximately the same

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Compulsory & Not Compulsory

Obligatory subjects

Elective subjects

Optional subjects

Non-compulsory part exists in every curriculum

- In Latvia 75% obligatory part and 25% elective part

In Hradec Kralove compulsory part, recommended part and optional lectures

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In Szeged “special courses” – 150-160 contact hours

In Kaunas – 32 contact hours per year = 160 hours

In Poznan – 180 hours program of elective subjects starting from the second year

In Estonia – non-obligatory part takes about 14.5% from auditory work

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CONCLUSIONS

- Regardless of that the development of the curricula took place during the same period (in 1990`s) and the EU directives were followed, **they are different in their essence**
- All the analysed curricula are drug-oriented, the development of which will continue towards medicine
- On the basis of the curricula, it is difficult to find the common part and to define the core curriculum



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PHARMACY STUDIES IN THE NEW EU COUNTRIES ARE TRADITIONALLY IN A GOOD LEVEL

AS THESE COUNTRIES HAVE PAID A LOT OF ATTENTION TO THE DEVELOPMENT OF THE CURRICULA, THEN THE CURRICULA ARE CONSIDERING THE NEEDS OF THE COUNTRY AS WELL AS THEY ARE COMPARABLE IN THE EUROPEAN CONTEXT

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The EU Directives are very general, which has enabled the development of the curricula in different directions

The harmonisation of the pharmacy studies on the basis of the European curricula has proved impossible

Mutual recognition of diplomas

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“Harmonisation” should be started with specifying, supplementing and updating the list of the knowledge and skills and also with the list of activities of the pharmacists

Then the content of the subjects in the curriculum should be defined or the theoretical and practical topics should be described, that would guarantee a compulsory common part of the knowledge of the graduated pharmacists

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WHAT DOES THE PHARMACEUTICAL COMMUNITY EXPECT FROM THE GRADUATES OF THE PHARMACY STUDIES IN THE UNIVERSITY?

- professional skills

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WHAT DOES THE SOCIETY EXPECT FROM THE GRADUATES OF THE PHARMACY STUDIES IN THE UNIVERSITY?

- the graduate of the university should be harmoniously educated and competent on his/her speciality

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WHAT IS THE MISSION OF THE UNIVERSITY?

- the mission is to train versatile and highly educated specialists for preserving and furthering the country
- principles of *universitas*

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MAGNA CHARTA UNIVERSITATUM, BOLOGNA 1988

- Universities` task of spreading knowledge among the younger generation implies that in today`s world they must serve the society as a whole

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- This goal cannot be achieved with the curriculum consisting of speciality subjects only
- In order to find a place in the society, feel secure and contribute to the development of society with one`s professional competence, a pharmacist graduated from the university must be familiar with the culture, social and economic situation, and possible developments of both the micro-society and the macro-society

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**WE ARE TRYING TO TEACH
THE WHOLE PHARMACY
IN 4 – 5 YEARS**

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A vertical photograph on the left side of the slide showing a street lamp and the facade of a classical building with columns and a flag.

HAVE PHARMACY STUDIES BECOME TOO MUCH LIKE PROFESSIONAL TRAINING?

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How could it be achieved that a graduate of the university would be harmoniously educated and competent on his/her own speciality?

Unique competence – knowledge that no other specialist is able to give to the society

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