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Learning outcomes based on acquiring competencies: pharmacy students professional practice

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Introduction



- Aim of the education is that students apply into practice the knowledge and skills they obtained theoretically.
- Learning based on experience in a real working environment is a very important component in the education of pharmacists.
- Enables the achievement of competencies as learning outcomes, with better efficacy and provision of a higher level of quality of the teaching process.



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Competencies

Abilities based on the activities and results of those activities, which arise from knowledge, skills and experience.

General and Specific competencies

- personal competencies
- competencies in problem-solving
- competencies in the field of management and organization

Three aspects of the competencies:

- Cognitive (knowledge),
- Functional (skills) and
- Social (behavior)





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Professional practice of pharmacy students -aims-

- A student acquires and develops the ability to connect his acquired theoretical knowledge and skills, and new knowledge and skills as well
- Creation of proper personal and professional attitudes, demeanor, and responsibility.

X semester – 100 hours - *Pharmacy Nis & Clinical Centre Nis*

New accreditation: X semester – 300 hours

-Mutual document for all pharmacy students in Serbia

(ReFEEHS)

Pharmacy Nis and Clinical centre Nis

teaching bases of the Medical Faculty





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Knowledge required of pharmacy students before their inclusion into professional practice

- *About medicine* (active substances and excipients, pharmaceutical formulations, manufacturing, preparation, quality control, storage) and *medical devices*
- About *the patient* (organism, disease, pharmacotherapy, phytotherapy, pharmaceutical care)
- About *healthcare system/pharmaceutical health activity* (pharmaceutical legislation and professional regulation, national drug policy, organization of the pharmaceutical sector, quality of pharmaceutical services)



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Skills required of pharmacy students before their inclusion in professional practice

- Use of professional and scientific literature
- Use of information technology systems
- Laboratory work
- Proper handling of apparatuses and equipment
- Qualitative and quantitative analysis in pharmacy
- Pharmaceutical compounding
- Identification and resolution of professional problems
- Safe handling of chemical, biological and pharmaceutical waste
- Individual and team work



Virtual pharmacy in a medical school

X semester – 30 hours





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Professional practice of pharmacy students

- contents -

- *Pharmacotherapy and Pharmaceutical practice*
- Aspect of *Pharmaceutical care*
- *Pharmaceutical technology and Cosmetology*
- Aspect *of phytotherapy and dietetics*
- *Pharmaceutical administration, legislation and professional regulation*



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Outcomes



Upon finished professional practice, student is qualified to:

- conduct purchase, receipt and storage of the medical products and medical devices, dietetic, cosmetic and other products at the pharmacy
- do pharmaceutical compounding, based on the physician prescription
- dispense prescribed drug or OTC product
- evaluate the accuracy of medicine prescribing
- implement the basic principles of rational therapy
- provide competent patients counseling regarding prescribed medicine and OTC
- identify drug-related problems and create a pharmaceutical care plan
- use an adequate literature
- fill out and send an application for drug adverse effect to ALIMIS
- maintain professional records



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Professional practice 6 months

(REFEEHS - standard 2)

32 competencies of students, who successfully complete the course of student professional practice

- Active participation in public health and patient counselling about prevention and control of disease, health promotion
- Patient counselling about rational pharmacotherapy, control of medicines expiration date and disposal of expired medicines
- Adequate choice of pharmaceutical formulation, dosage and package in with respect to valid legislation about drug dispensing, consultation with physician and patient



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Evaluation of the competencies

- Evaluation of the competencies using appropriate tools and models in a real working environment and in direct contact with patients
- Method based on a structured approach, the objective structured clinical examination (OSCE)
- Communication, selection of the patients, presentation, appearance, known scenarios
- Each skill is defined by the level of the skills



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Level of the skills of pharmacy students

- Student has a theoretical knowledge about the skill (T)
- Student has a theoretical knowledge about the skill, but only observed the performance (P)
- Student has theoretical knowledge about the skill and capability to perform that skill under supervision (A)
- Student has theoretical knowledge about the skill and performs that skill as a routine procedure (I)

Department of Pharmacy

Faculty of Medicine, University of Nis
established 2002.

