

University undergraduate study of Cosmetology at Faculty of pharmacy: Why and how?

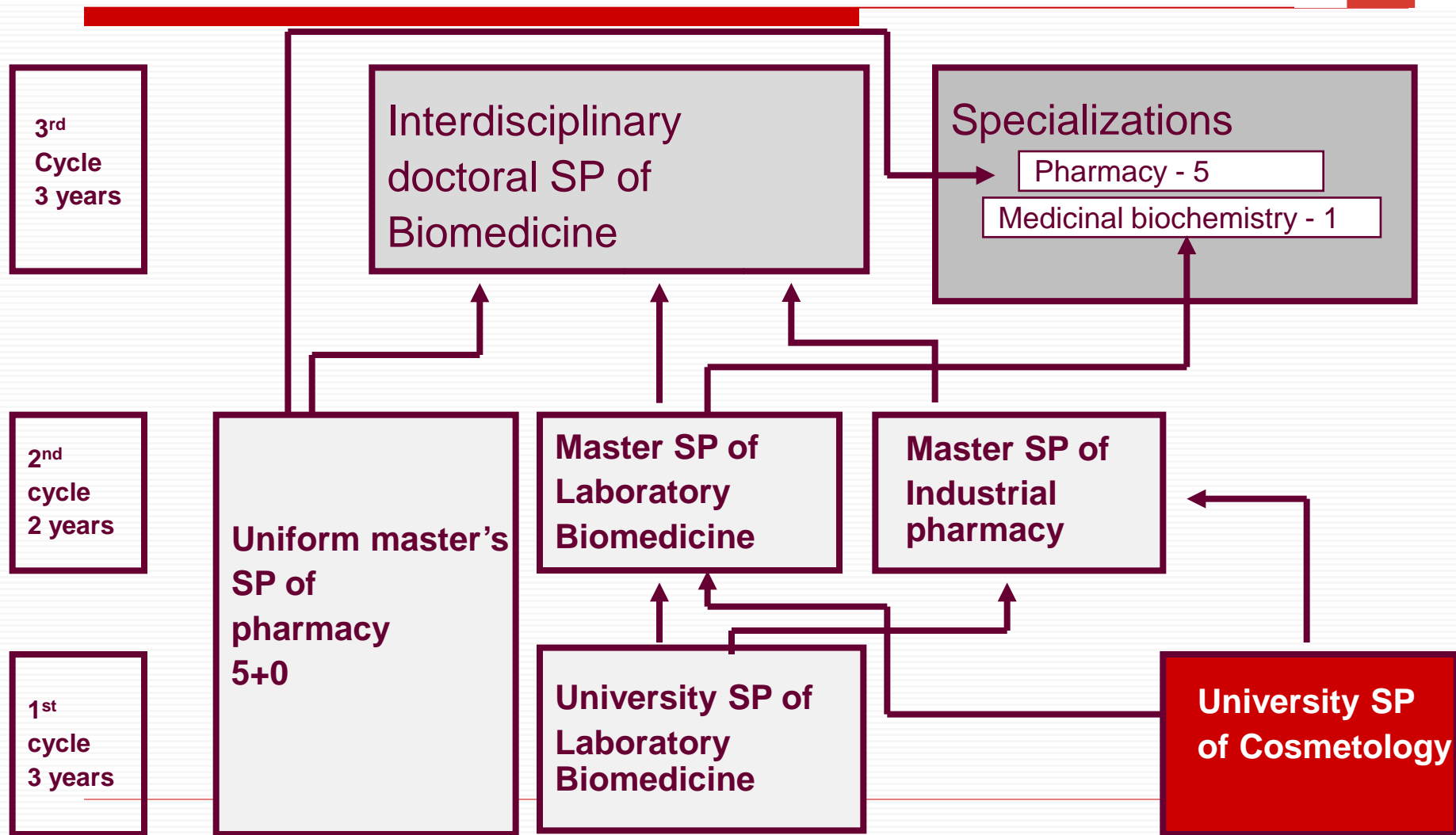
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P-SC- COS member



Study programmes at Faculty of pharmacy UL





Background

1st cycle undergraduate study programme of Cosmetology

- Accreditation in 2008 by NAKVIS (Slovenian Quality Assurance Agency for higher Education)
- Introduction in the academic year of 2010/2011

The main objectives:

- to educate skilled professionals for conducting business in cosmetic industry, regulation and inspection services, research institutions, cosmetic product consultation and marketing,...)
 - to provide adequate fundamental knowledge to continue study on master degree
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Why cosmetology ?

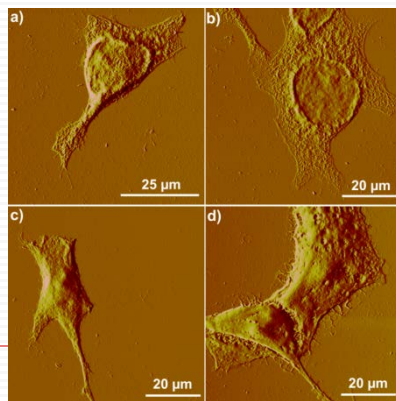
- Cosmetology as a scientific discipline
- Difference between cosmetology and cosmetics
 - Cosmetology: from [Greek](#) κοσμητικός, *kosmētikos*, "beautifying"; and -λογία, *-logia*) is the study and application of beauty treatment
 - Cosmetics - from Greek *kosmētikos*, any preparation applied to the body especially the face with the intention to beautify; having power to adorn, embellish or beautify; intended merely to improve appearances. (*OED*)
- Interdisciplinarity (chemistry, biology, pharmacy, medicine/dermatology, toxicology, bio- and nanotechnology, engineering, materials, instrumental analysis, economy, marketing,...)
- A need for high quality and up to date programme to acquire suitable knowledge of cosmetology dictated by rapid and extensive development in this area

- To educate professionals to support cosmetic industry efficiently



Why Cosmetology at Faculty of Pharmacy UL?

- Historical background
 - Introduction of elective subject of Cosmetology into Pharmacy curriculum (1991)
 - Introduction of elective subject of Cosmetology & Cosmetic products into Industrial Pharmacy curriculum (2008)
 - Basic cosmetological issues are partially covered in pharmacy curriculum
- Research capacities - appropriate laboratories, equipment & expertise (dermal/transdermal delivery, novel colloidal carriers, analysis, ...)





Why Cosmetology at Faculty of Pharmacy UL?

- Habilitation field
 - Recognizable activity of our experts
 - Lecturers within LLL programmes for pharmacists and pharmaceutical technicians
 - Member of Expert group for cosmetics questions (Chemical Office of republic of Slovenia within Ministry of health)
 - Member of Committee of experts on cosmetic products (P-SC-COS) by EDQM, Strasbourg
 - Consultation activities (cosmetic industry, small producers, regulations,...)
 - ...
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Characteristics of the study programme

- Undergraduate study : 1st cycle university study
 - Duration: 3 years, 180 ECTS
 - Enrolment requirements:
 - Passed matura examination
 - Passed vocational matura examination in any high school programme and chemistry or biology exam within the matura examination
 - Requirements for completion: all study obligations finished + diploma thesis
 - Title awarded: Bachelor of Cosmetology (UN)
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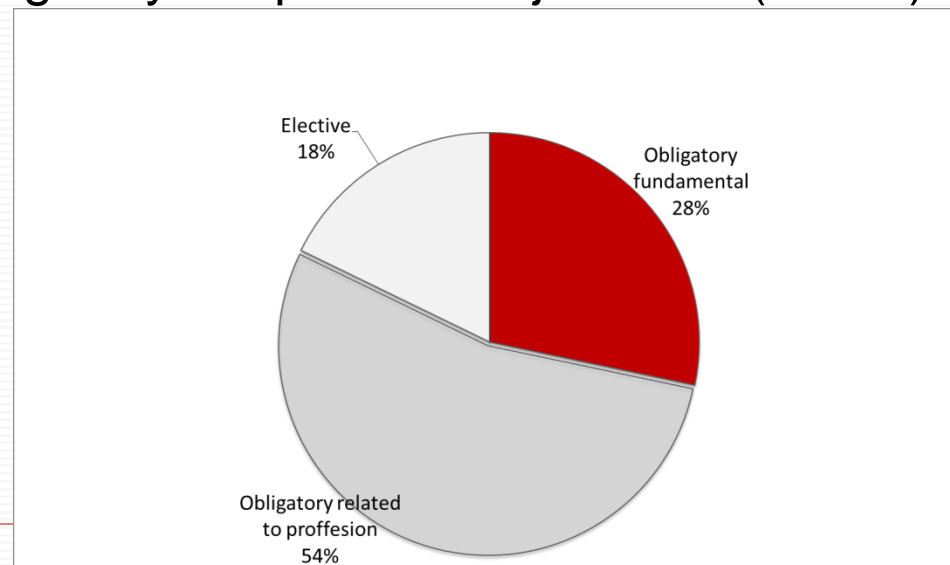


Characteristics of the study programme

Curriculum

- ❑ Organized classes (158 ECTS) and individual research work for diploma thesis (22 ECTS)
- ❑ 30 courses; 21 obligatory and 9 optional

Obligatory to optional subject ratio (ECTS)





Curriculum – 1st year

1 st year	Contact hours				ECTS
	L	S	E	Σ	
Semester 1					
Mathematics with statistics	45	-	15	60	5
Physics	60	-	30	90	7
General and organic chemistry	30	30	-	60	5
Anatomy and histology	30	-	30	60	5
Cosmetic products 1	30	-	-	30	3
Introduction to cosmetology	30	30	-	60	5
Semester 2					
General and organic chemistry	45	30	-	75	6
Cell biology with genetics	45	15	30	90	8
Cosmetic products 1	90	15	90	195	16



Curriculum – 2nd year

2 nd year	Contact hours					ECTS
	L	S	E	O	Σ	
Semester 3						
Biochemistry	30	15	15	-	60	5
Basics of dermatology	40	20	-	-	60	5
Cosmetic products 2	45	30	45	-	120	12
Packiging and stability	30	15	15	-	60	5
Informatic in cosmetology	15	30	-	-	45	3
Semester 4						
Cosmetic products 2	30	30	-	-	60	5
Natural cosmetic ingredients	30	15	15	-	60	5
Skin immunology with immunochemistry	30	15	15	-	60	5
Instrumental analysis in cosmetology	45	15	30	-	90	7
Toxicology	45	15	-	-	60	5
Optional course I	30	15	-	15	60	5

L- lectures, S - seminars; E- experimental, O - other



Curriculum – 3rd year

3 rd year	Contact hours					ECTS
	L	S	E	O	Σ	
Semester 5						
Nanotechnology in cosmetology	60	-	30	-	90	8
Evaluation of cosmetic products	45	30	15	-	90	7
Biotechnology in cosmetics	30	15	15		60	5
Optional course II	30	15	-	15	60	5
Optional course III	30	15	-	15	60	5
Semester 6						
Interfacial phenomena	45	15	30	-	90	8
Individual project work	-	-	-	100	100	17
Thesis defence	-	-	-	15	15	5

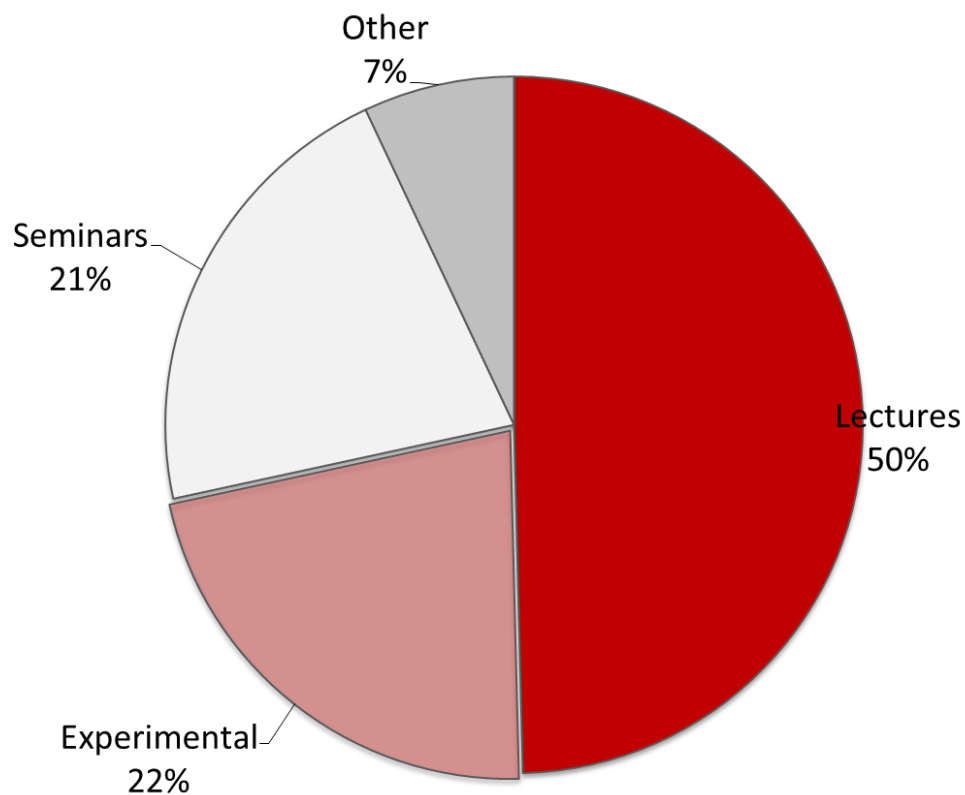


Optional courses

Optional Courses	ECTS
Toxicology of cosmetic ingredients	5
Nutritional supplements	5
Skin and metabolic disorders	5
Reactive intermediates in the skin and antioxidants	5
Cellular and tissue cultures	5
Physiology	5
Field-specific English	5
Microbiology	5
Cosmetics in sports	5



Characteristics of the study programme





Individual project work & thesis defence

Individual project work

- Independent research work concluded by thesis
- Student selects a topic and a supervising teacher – mentor

Thesis defence

- Preparation of the thesis with elements of a scientific article: title, contents, summary, list of abbreviations, introduction, aim of the study with a working hypothesis, materials and methods, results, discussion, conclusions, bibliography.
 - Oral presentation and defence of the thesis
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General competences

- ❑ understanding the theoretical bases of natural sciences and developed ability of natural scientific thinking;
 - ❑ ability to transfer and use theoretical knowledge into practice;
 - ❑ ability to experiment and provide different concepts of thinking;
 - ❑ ability to interpret acquired knowledge, ability of independent learning and innovative involvement in the selected field of expertise;
 - ❑ initiative and independence in performance of certain tasks;
 - ❑ ability to communicate with the co-workers and experts of related disciplines, and active participation in the team-work;
 - ❑ capacity to perform individual research work and possess knowledge needed for communication and publication of results;
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General competences

- proper skills for understanding, introduction, application and evaluation of modern techniques and methods for the use in the professional and research fields of cosmetology, ability to search for and classify new information;
 - ability to use the state-of-the-art computer and information tools, competences and skills that are present in everyday professional work;
 - developed professional ethical responsibility;
 - developed health responsibility concerning care and maintenance of good body condition with regard to the principles of co Independent research work concluded by thesis.
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And after the study ?

Job market

- ❑ Skilled professionals for working in cosmetic (or related) industry, regulation, inspection services, research institutions, cosmetic product consultation and marketing ,...

Master programmes (MP)

- ❑ No cosmetology MP at Faculty of pharmacy UL
 - ❑ Possibility to continue on MP of Industrial Pharmacy or MP of Laboratory biomedicine (with passed differential exam)
 - ❑ Possibility to continue on any other MS (different admission requirements)
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Some data...

□ Number of students

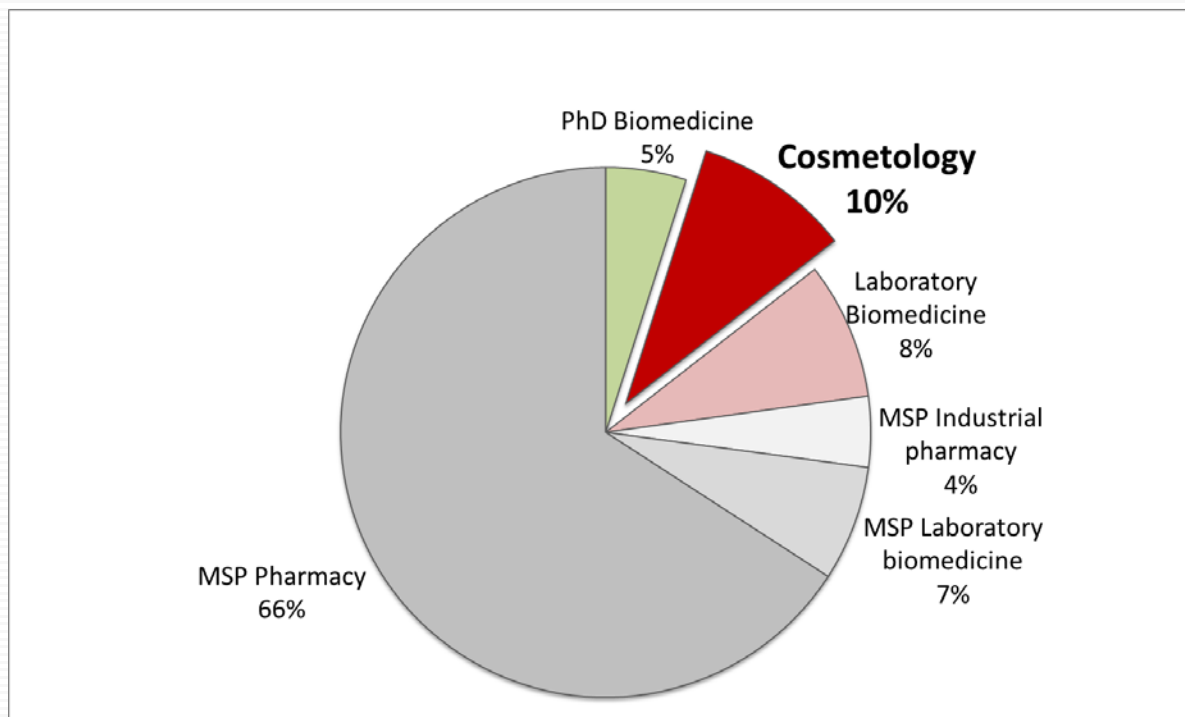
	2010	2011	2012	2013	2014
Call	40	40	40	40	40
Application	65	70	72	59	54
Accepted	41 +4	41 +4	44 + 4	43	

□ Number of graduates: 6



Some data...

Ratio of Cosmetology students at FFA in 2014





Instead of conclusion...

Quality assurance

- Coordinators for each study program
- Discussion after each semester with students and teaching staff
⇒ subsequent corrections of minor difficulties
- Partial evaluation after each study year

Challenge that remains

- Better promotion of the study programme and graduates

Future plans

- Taking in consideration the actual situation and the globalization needs in cosmetics, an upgrade of this course to offer a master's degree program is considered.
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