



UNIVERSITY OF  
**PATRAS**  
ΠΑΝΕΠΙΣΤΗΜΙΟ ΠΑΤΡΩΝ

DEPARTMENT OF PHARMACY

SCHOOL OF HEALTH SCIENCES

UNIVERSITY OF PATRAS  
SCHOOL OF HEALTH SCIENCES  
DEPARTMENT OF PHARMACY

POSTGRADUATE SPROGRAM: **COSMETOLOGY - PREPARATION AND EVALUATION  
OF COSMETIC PRODUCTS**

## **COURSES DESCRIPTION**

**PATRAS 2023**

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UNIVERSITY OF PATRAS  
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DEPARTMENT OF PHARMACY  
POSTGRADUATE PROGRAM: **COSMETOLOGY - PREPARATION AND EVALUATION  
OF COSMETIC PRODUCTS**

COURSE TITLE: **PHYSIOLOGY OF HUMAN SKIN-DERMATOLOGY**  
CODE: **PHA-COS-11**

**PHYSIOLOGY OF HUMAN SKIN-DERMATOLOGY  
COURSE OUTLINE**

**1. GENERAL**

<b>SCHOOL</b>	HEALTH SCIENCES		
<b>ACADEMIC UNIT</b>	DEPARTMENT OF PHARMACY		
<b>PARTICIPATING INSTITUTIONS</b>	-		
<b>TITLE of POSTGRADUATE PROGRAM</b>	COSMETOLOGY - PREPARATION AND EVALUATION OF COSMETIC PRODUCTS		
<b>LEVEL</b>	POSTGRADUATE		
<b>COURSE CODE</b>	PHA-COS-11	<b>SEMESTER</b>	A'
<b>COURSE TITLE</b>	PHYSIOLOGY OF HUMAN SKIN-DERMATOLOGY		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>	
Courses	3	6	
<b>COURSE TYPE</b>	Field of Science		
<b>PREREQUISITE COURSES</b>	None		
<b>LANGUAGE of INSTRUCTION and EXAMINATIONS</b>	Greek		
<b>COURSE OFFERED to ERASMUS STUDENTS</b>	No		
<b>COURSE (URL)</b>	<a href="http://www.pharmacy.upatras.gr/images/DS/PHA-COS-11_EN.pdf">http://www.pharmacy.upatras.gr/images/DS/PHA-COS-11_EN.pdf</a>		

**2. LEARNING OUTCOMES**

<b>Learning Outcomes</b>
By the end of this course the student will be able to know
<ol style="list-style-type: none"> <li>1. Elements of the anatomy and physiology of the skin</li> <li>2. The characteristics and properties of the Skin Barrier</li> <li>3. Skin Immunology Data</li> <li>4. Dermatological Methods of Studying the Safety of Cosmetic Products (Patch test, "Hypoallergenic" Cosmetic Products)</li> </ol>
<b>General Competences</b>
By the end of this course the student will, furthermore, have develop the following general abilities (from the list above):
<i>Decision making</i>
<i>Autonomous (Independent) work</i>
<i>Group work</i>

### 3. SYLLABUS

#### LECTURES

- Anatomy and Physiology of the skin
- Characteristics and properties of the Skin Barrier
- Immunology of the Skin
- Dermatological Methods of Studying the Safety of Cosmetic Products  
(Patch test, "Hypoallergenic" Cosmetic Products)

### 4. TEACHING and LEARNING METHODS - EVALUATION

<b>DELIVERY</b>	In the classroom	
<b>USE of INFORMATION and COMMUNICATIONS TECHNOLOGY</b>	Learning process support through the e-class electronic platform to exchange files and lectures and to communicate with students. Lectures and presentations are all done using Information and Communication Technologies (ICTs) and information is searched through relevant databases.	
<b>TEACHING METHODS</b>	<b>Activity</b>	<b>Semester Workload</b>
	Lectures	60
	Literature study	50
	Assignment – Presentation of a relevant topic from the international literature	40
	<b>Course Total (25 hours of work-load per ECTS credit)</b>	<b>150</b>
<b>STUDENT PERFORMANCE EVALUATION</b>	Language of Evaluation: Greek  1. Written final exam (80%) which includes <ul style="list-style-type: none"> <li>• Short development questions</li> <li>• Critical thinking Questions</li> </ul> 2. Assignment – Presentation of a relevant topic from the international literature (20%)	

### 5. RECOMMENDED BIBLIOGRAPHY

#### **Suggested Bibliography:**

1. Anatomy and Physiology of the Skin
2. Kolarsick, Paul A. J. BS; Kolarsick, Maria Ann MSN
3. Journal of the Dermatology Nurses' Association: July-August 2011 - Volume 3 - Issue 4 - p 203-213
4. Pathogenesis of atopic dermatitis: A short review Egava G et al. Cogent Biology 2015
5. Atopic dermatitis Weidinger S, Novak K. 12;387(10023):1109-1122, Lancet 2016
6. Atopic Dermatitis: Natural History, Diagnosis, and Treatment Simon Francis Thomsen . ISRN Allergy 2014
7. Atopic dermatitis and the therapeutic methods: a literature review Jalil Tavakol Afshari, Mahdi Yousefi, Roshanak Salari. 3 (4): 158-162. Review in Clinical Medicine, 2016



UNIVERSITY OF PATRAS  
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DEPARTMENT OF PHARMACY  
POSTGRADUATE PROGRAM: **COSMETOLOGY - PREPARATION AND EVALUATION  
OF COSMETIC PRODUCTS**

COURSE TITLE: LEGISLATION AND REGULATORY FRAMEWORK ON THE PRODUCTION  
AND DISTRIBUTION OF COSMETIC PRODUCTS  
CODE: PHA-COS-12

**LEGISLATION AND REGULATORY FRAMEWORK ON THE PRODUCTION  
AND DISTRIBUTION OF COSMETIC PRODUCTS  
COURSE OUTLINE**

**1. GENERAL**

<b>SCHOOL</b>	HEALTH SCIENCES		
<b>ACADEMIC UNIT</b>	DEPARTMENT OF PHARMACY		
<b>PARTICIPATING INSTITUTIONS</b>	-		
<b>TITLE of POSTGRADUATE PROGRAM</b>	COSMETOLOGY - PREPARATION AND EVALUATION OF COSMETIC PRODUCTS		
<b>LEVEL</b>	POSTGRADUATE		
<b>COURSE CODE</b>	PHA-COS-12	<b>SEMESTER</b>	A'
<b>COURSE TITLE</b>	LEGISLATION AND REGULATORY FRAMEWORK ON THE PRODUCTION AND DISTRIBUTION OF COSMETIC PRODUCTS		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>	
Courses	3	6	
<b>COURSE TYPE</b>	Field of Science		
<b>PREREQUISITE COURSES</b>	None		
<b>LANGUAGE of INSTRUCTION and EXAMINATIONS</b>	Greek		
<b>COURSE OFFERED to ERASMUS STUDENTS</b>	No		
<b>COURSE (URL)</b>	<a href="http://www.pharmacy.upatras.gr/images/DS/PHA-COS-12_EN.pdf">http://www.pharmacy.upatras.gr/images/DS/PHA-COS-12_EN.pdf</a>		

**2. LEARNING OUTCOMES**

<b>Learning Outcomes</b>
<p>By the end of this course the student will be able to know</p> <ol style="list-style-type: none"> <li>1. The European and International Regulatory Framework of Cosmetic Products</li> <li>2. The legislation regarding special categories of Cosmetic Products and their Ingredients such as: Fragrances (allergens), Sunscreen Products, Carcinogens/ Mutagens.</li> <li>3. Guidelines for technical definitions and criteria for natural and organic cosmetic ingredients and products</li> <li>4. To recognize and classify products within the limits of legislation (Border-line cosmetics)</li> <li>5. Compile a Cosmetic Product File (Product Information File, PIF)</li> </ol>

## General Competences

By the end of this course the student will, furthermore, have developed the following general abilities (from the list above):

*Decision making*

*Autonomous (Independent) work*

*Group work*

### 3. SYLLABUS

#### LECTURES

- European and International Regulatory Framework for Cosmetic Products
- Cosmetic Product File (Product Information File, PIF)
- Legislation regarding special categories of Cosmetic Products and their Ingredients such as: Fragrances (allergens), Sunscreen Products, Carcinogens/ Mutagens.
- Guidelines for technical definitions and criteria for natural and organic cosmetic ingredients and products
- Products at the limits of the legislation (Border-line cosmetics)

### 4. TEACHING and LEARNING METHODS - EVALUATION

<b>DELIVERY</b>	In the classroom										
<b>USE of INFORMATION and COMMUNICATIONS TECHNOLOGY</b>	Learning process support through the e-class electronic platform to exchange files and lectures and to communicate with students. Lectures and presentations are all done using Information and Communication Technologies (ICTs) and information is searched through relevant databases.										
<b>TEACHING METHODS</b>	<table><thead><tr><th><i>Activity</i></th><th><i>Semester Workload</i></th></tr></thead><tbody><tr><td>Lectures</td><td>60</td></tr><tr><td>Literature study</td><td>50</td></tr><tr><td>Assignment – Compilation of Cosmetic Product Information File</td><td>40</td></tr><tr><td><b>Course Total (25 hours of work-load per ECTS credit)</b></td><td><b>150</b></td></tr></tbody></table>	<i>Activity</i>	<i>Semester Workload</i>	Lectures	60	Literature study	50	Assignment – Compilation of Cosmetic Product Information File	40	<b>Course Total (25 hours of work-load per ECTS credit)</b>	<b>150</b>
<i>Activity</i>	<i>Semester Workload</i>										
Lectures	60										
Literature study	50										
Assignment – Compilation of Cosmetic Product Information File	40										
<b>Course Total (25 hours of work-load per ECTS credit)</b>	<b>150</b>										
<b>STUDENT PERFORMANCE EVALUATION</b>	Language of Evaluation: Greek <ol style="list-style-type: none"><li>1. Written final exam (80%) which includes<ul style="list-style-type: none"><li>• Short development questions</li><li>• Critical thinking Questions</li></ul></li><li>2. Assignment – Presentation of a relevant topic from the international literature (20%)</li></ol>										

### 5. RECOMMENDED BIBLIOGRAPHY

1. Regulation (EC) No 1223/2009
2. Regulation (EC) No 655/2013
3. Regulation (EC) No 1272/2008
4. Directive (EC) No 76/768
5. Directive (EC) No 15/2003





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DEPARTMENT OF PHARMACY  
POSTGRADUATE PROGRAM: **COSMETOLOGY - PREPARATION AND EVALUATION  
OF COSMETIC PRODUCTS**

COURSE TITLE: **INGREDIENTS OF COSMETIC PRODUCTS**  
CODE: **PHA-COS-13**

**INGREDIENTS OF COSMETIC PRODUCTS**  
**COURSE OUTLINE**

**1. GENERAL**

<b>SCHOOL</b>	HEALTH SCIENCES		
<b>ACADEMIC UNIT</b>	DEPARTMENT OF PHARMACY		
<b>PARTICIPATING INSTITUTIONS</b>	-		
<b>TITLE of POSTGRADUATE PROGRAM</b>	COSMETOLOGY - PREPARATION AND EVALUATION OF COSMETIC PRODUCTS		
<b>LEVEL</b>	POSTGRADUATE		
<b>COURSE CODE</b>	PHA-COS-13	<b>SEMESTER</b>	A'
<b>COURSE TITLE</b>	INGREDIENTS OF COSMETIC PRODUCTS		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>	
Courses	3	6	
<b>COURSE TYPE</b>	Field of Science		
<b>PREREQUISITE COURSES</b>	None		
<b>LANGUAGE of INSTRUCTION and EXAMINATIONS</b>	Greek		
<b>COURSE OFFERED to ERASMUS STUDENTS</b>	No		
<b>COURSE (URL)</b>	<a href="http://www.pharmacy.upatras.gr/images/DS/PHA-COS-13_EN.pdf">http://www.pharmacy.upatras.gr/images/DS/PHA-COS-13_EN.pdf</a>		

**2. LEARNING OUTCOMES**

<b>Learning Outcomes</b>
By the end of this course the student will be able to know <ol style="list-style-type: none"> <li>1. Functional ingredients used in various cosmetic forms (oily and fatty substances, surfactants, polymers, sun filters, pigments, preservatives, antioxidants, pharmaceutical agents)</li> <li>2. Synthetic and semi-synthetic, herbal ingredients, ingredients of animal origin, ingredients of mineral origin</li> <li>3. The methods of "officialization" of raw materials for use in cosmetic products</li> </ol>
<b>General Competences</b>
By the end of this course the student will, furthermore, have develop the following general abilities (from the list above): <p><i>Decision making</i></p> <p><i>Autonomous (Independent) work</i></p> <p><i>Group work</i></p>

### 3. SYLLABUS

#### LECTURES

- Functional ingredients used in various cosmetic forms (oily and fatty substances, surfactants, polymers, sun filters, pigments, preservatives, antioxidants, pharmaceutical agents)
- Synthetic and semi-synthetic ingredients
- Herbal ingredients
- Ingredients of animal origin
- Ingredients of mineral origin
- Methods of "officialization" of raw materials for use in cosmetic products

### 4. TEACHING and LEARNING METHODS - EVALUATION

<b>DELIVERY</b>	In the classroom										
<b>USE of INFORMATION and COMMUNICATIONS TECHNOLOGY</b>	Learning process support through the e-class electronic platform to exchange files and lectures and to communicate with students. Lectures and presentations are all done using Information and Communication Technologies (ICTs) and information is searched through relevant databases.										
<b>TEACHING METHODS</b>	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><i>Activity</i></th> <th style="text-align: right;"><i>Semester Workload</i></th> </tr> </thead> <tbody> <tr> <td>Lectures</td> <td style="text-align: right;">60</td> </tr> <tr> <td>Literature study</td> <td style="text-align: right;">50</td> </tr> <tr> <td>Assignment – Presentation of a relevant topic from the international literature</td> <td style="text-align: right;">40</td> </tr> <tr> <td><b>Course Total (25 hours of work-load per ECTS credit)</b></td> <td style="text-align: right;"><b>150</b></td> </tr> </tbody> </table>	<i>Activity</i>	<i>Semester Workload</i>	Lectures	60	Literature study	50	Assignment – Presentation of a relevant topic from the international literature	40	<b>Course Total (25 hours of work-load per ECTS credit)</b>	<b>150</b>
<i>Activity</i>	<i>Semester Workload</i>										
Lectures	60										
Literature study	50										
Assignment – Presentation of a relevant topic from the international literature	40										
<b>Course Total (25 hours of work-load per ECTS credit)</b>	<b>150</b>										
<b>STUDENT PERFORMANCE EVALUATION</b>	<p>Language of Evaluation: Greek</p> <ol style="list-style-type: none"> <li>Written final exam (80%) which includes <ul style="list-style-type: none"> <li>• Short development questions</li> <li>• Critical thinking Questions</li> </ul> </li> <li>Assignment – Compilation of Cosmetic Product Information File (20%)</li> </ol>										

### 5. RECOMMENDED BIBLIOGRAPHY

1. Handbook of Cosmetic Science and Technology, André O. Barel, Marc Paye, Howard I. Maibach, eds, Marcel Dekker, Inc. New York • Basel, 2001, ISBN: 0-8247-0292-1
2. Formulas, Ingredients and Production of Cosmetics Technology of Skin- and Hair-Care Products in Japan Hiroshi Iwata, Kunio Shimada eds, Springer Tokyo Heidelberg New York Dordrecht London 2013, ISBN 978-4-431-54060-1
3. New Cosmetic Science T. Mitsui ed, Elsevier the Netherlands 1998, ISBN 0 444 82654 8
4. Chemistry and Technology of the Cosmetics and Toiletries Industry, Williams, D.F., Schmitt W.H eds, Springer Science+ Business Media New York 1992. ISBN 978-94-010-5007-4



UNIVERSITY OF PATRAS  
SCHOOL OF HEALTH SCIENCES  
DEPARTMENT OF PHARMACY  
POSTGRADUATE PROGRAM: **COSMETOLOGY - PREPARATION AND EVALUATION  
OF COSMETIC PRODUCTS**

COURSE TITLE: MICROBIOLOGY  
CODE: PHA-COS-14

**MICROBIOLOGY  
COURSE OUTLINE**

**1. GENERAL**

<b>SCHOOL</b>	HEALTH SCIENCES		
<b>ACADEMIC UNIT</b>	DEPARTMENT OF PHARMACY		
<b>PARTICIPATING INSTITUTIONS</b>	-		
<b>TITLE of POSTGRADUATE PROGRAM</b>	COSMETOLOGY - PREPARATION AND EVALUATION OF COSMETIC PRODUCTS		
<b>LEVEL</b>	POSTGRADUATE		
<b>COURSE CODE</b>	<b>PHA-COS-14</b>	<b>SEMESTER</b>	<b>A'</b>
<b>COURSE TITLE</b>	<b>MICROBIOLOGY</b>		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>	
Courses	3	6	
<b>COURSE TYPE</b>	Field of Science		
<b>PREREQUISITE COURSES</b>	None		
<b>LANGUAGE of INSTRUCTION and EXAMINATIONS</b>	Greek		
<b>COURSE OFFERED to ERASMUS STUDENTS</b>	No		
<b>COURSE (URL)</b>	<a href="http://www.pharmacy.upatras.gr/images/DS/PHA-COS-14_EN.pdf">http://www.pharmacy.upatras.gr/images/DS/PHA-COS-14_EN.pdf</a>		

**2. LEARNING OUTCOMES**

<b>Learning Outcomes</b>
<p>By the end of this course the student will be able to know</p> <ol style="list-style-type: none"> <li>1. the principles of detection and counting of microorganisms, as well as the microbiological limits in various categories of cosmetic products.</li> <li>2. the guidelines for risk assessment and identification of microbiologically low risk products and evaluate the antimicrobial protection of a cosmetic product.</li> <li>3. the guidelines for the application of ISO standards for cosmetic microbiology</li> </ol>
<b>General Competences</b>
<p>By the end of this course the student will, furthermore, have develop the following general abilities (from the list above):</p> <p><i>Decision making</i> <i>Autonomous (Independent) work</i> <i>Group work</i></p>

### 3. SYLLABUS

LECTURES
<ul style="list-style-type: none"> <li>• Evaluation of the antimicrobial protection of a cosmetic product</li> <li>• General instructions for microbiological examination</li> <li>• Microbiological limits</li> <li>• Detection of microorganisms</li> <li>• Counting of yeasts and fungi</li> <li>• Counting and detection of aerobic mesophilic bacteria</li> <li>• Detection of Escherichia coli</li> <li>• Detection of Pseudomonas aeruginosa</li> <li>• Detection of Staphylococcus aureus</li> <li>• Microbiological controls of impregnated or coated products - wipes and masks</li> <li>• Guidelines for the application of ISO standards for cosmetic microbiology</li> <li>• Guidelines for risk assessment and identification of microbiologically low risk products</li> </ul>

### 4. TEACHING and LEARNING METHODS - EVALUATION

<b>DELIVERY</b>	In the classroom	
<b>USE of INFORMATION and COMMUNICATIONS TECHNOLOGY</b>	Learning process support through the e-class electronic platform to exchange files and lectures and to communicate with students. Lectures and presentations are all done using Information and Communication Technologies (ICTs) and information is searched through relevant databases.	
<b>TEACHING METHODS</b>	<b>Activity</b>	<b>Semester Workload</b>
	Lectures	60
	Literature study	50
	Assignment – Presentation of a relevant topic from the international literature	40
	<b>Course Total (25 hours of work-load per ECTS credit)</b>	<b>150</b>
<b>STUDENT PERFORMANCE EVALUATION</b>	Language of Evaluation: Greek	
	1. Written final exam (80%) which includes	
	<ul style="list-style-type: none"> <li>• Short development questions</li> <li>• Critical thinking Questions</li> </ul>	
	2. Assignment – Compilation of Cosmetic Product Information File (20%)	

### 5. RECOMMENDED BIBLIOGRAPHY

<ol style="list-style-type: none"> <li>1. Cosmetic Microbiology, a Practical Approach, 2nd Edition, Philip A. Geis Ed. Taylor &amp; Francis Group New York, London, 2006</li> <li>2. K. M. Burleson and B. M. Martinez-Vaz, Microbes in Mascara: Hypothesis-Driven Research in a Nonmajor Biology Lab, Journal Of Microbiology &amp; Biology Education, December 2011, p. 166-175</li> <li>3. Hyo Jung Lee, Sang Eun Jeong, Soyoun Lee<sup>3</sup>, Sungwoo Kim, Hyuntak Han, Che Ok Jeon, Effects of cosmetics on the skin microbiome of facial cheeks with different hydration levels, MicrobiologyOpen. 2018;7:e557, DOI 10.1002/mbo3.557</li> <li>4. Zeitoun et al. Microbiological testing of pharmaceuticals and cosmetics in Egypt, BMC Microbiology (2015) 15:275, DOI 10.1186/s12866-015-0609-z</li> </ol>
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DEPARTMENT OF PHARMACY  
POSTGRADUATE PROGRAM: **COSMETOLOGY - PREPARATION AND EVALUATION  
OF COSMETIC PRODUCTS**

COURSE TITLE: DEVELOPMENT OF COSMETIC PRODUCTS  
CODE: PHA-COS-15

**MICROBIOLOGY  
COURSE OUTLINE**

**1. GENERAL**

<b>SCHOOL</b>	HEALTH SCIENCES		
<b>ACADEMIC UNIT</b>	DEPARTMENT OF PHARMACY		
<b>PARTICIPATING INSTITUTIONS</b>	-		
<b>TITLE of POSTGRADUATE PROGRAM</b>	COSMETOLOGY - PREPARATION AND EVALUATION OF COSMETIC PRODUCTS		
<b>LEVEL</b>	POSTGRADUATE		
<b>COURSE CODE</b>	PHA-COS-15	<b>SEMESTER</b>	A'
<b>COURSE TITLE</b>	DEVELOPMENT OF COSMETIC PRODUCTS		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>	
Courses	3	6	
<b>COURSE TYPE</b>	Field of Science		
<b>PREREQUISITE COURSES</b>	None		
<b>LANGUAGE of INSTRUCTION and EXAMINATIONS</b>	Greek		
<b>COURSE OFFERED to ERASMUS STUDENTS</b>	No		
<b>COURSE (URL)</b>	<a href="http://www.pharmacy.upatras.gr/images/DS/PHA-COS-15_EN.pdf">http://www.pharmacy.upatras.gr/images/DS/PHA-COS-15_EN.pdf</a>		

**2. LEARNING OUTCOMES**

<b>Learning Outcomes</b>
By the end of this course the student will be able to design and develop new cosmetic products and prepare various Cosmetic Forms such as: creams, ointments, wash suspensions, foams, gels, sticks, loose and compressed powders, and aerosols
<b>General Competences</b>
By the end of this course the student will, furthermore, have develop the following general abilities (from the list above): <i>Decision making</i> <i>Autonomous (Independent) work</i> <i>Group work</i>



### 3. SYLLABUS

LECTURES
<ul style="list-style-type: none"> <li>• Design of Cosmetic Products</li> <li>• Manufacturing techniques of various Cosmetic Forms such as: Creams, Ointments, Washes (lotions), Suspensions, Foams, Gels, Sticks, Free and Compressed Powders and Aerosols.</li> <li>• Manufacturing techniques of various Categories of Cosmetic Products such as: Sunscreen products, Color Products, Face products, Body products, Hair products, Baby and children's cosmetics.</li> <li>• Advanced forms of cosmetics with nanotechnology (nanocosmetics) and techniques for evaluating the penetration of ingredients into the skin</li> <li>• Packaging and Labeling of Cosmetic Products</li> </ul>

### 4. TEACHING and LEARNING METHODS - EVALUATION

<b>DELIVERY</b>	In the classroom	
<b>USE of INFORMATION and COMMUNICATIONS TECHNOLOGY</b>	Learning process support through the e-class electronic platform to exchange files and lectures and to communicate with students. Lectures and presentations are all done using Information and Communication Technologies (ICTs) and information is searched through relevant databases.	
<b>TEACHING METHODS</b>	<b>Activity</b>	<b>Semester Workload</b>
	Lectures	60
	Literature study	50
	Assignment – Presentation of a relevant topic from the international literature	40
	<b>Course Total (25 hours of work-load per ECTS credit)</b>	<b>150</b>
<b>STUDENT PERFORMANCE EVALUATION</b>	Language of Evaluation: Greek	
	1. Written final exam (80%) which includes	
	<ul style="list-style-type: none"> <li>• Short development questions</li> <li>• Critical thinking Questions</li> </ul>	
	2. Assignment – Compilation of Cosmetic Product Information File (20%)	

### 5. RECOMMENDED BIBLIOGRAPHY

<ol style="list-style-type: none"> <li>1. Handbook of Cosmetic Science and Technology, André O. Barel, Marc Paye, Howard I. Maibach, eds, Marcel Dekker, Inc. New York • Basel, 2001, ISBN: 0-8247-0292-1</li> <li>2. Formulas, Ingredients and Production of Cosmetics Technology of Skin- and Hair-Care Products in Japan Hiroshi Iwata, Kunio Shimada eds, Springer Tokyo Heidelberg New York Dordrecht London 2013, ISBN 978-4-431-54060-1</li> <li>3. New Cosmetic Science T. Mitsui ed, Elsevier the Netherlands 1998, ISBN 0 444 82654 8</li> <li>4. Chemistry and Technology of the Cosmetics and Toiletries Industry, Williams, D.F., Schmitt W.H eds, Springer Science+ Business Media New York 1992. ISBN 978-94-010-5007-4</li> </ol>
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POSTGRADUATE PROGRAM: **COSMETOLOGY - PREPARATION AND EVALUATION  
OF COSMETIC PRODUCTS**

COURSE TITLE: **QUALITY AND SAFETY TESTING OF COSMETIC PRODUCTS**  
CODE: **PHA-COS-21**

**MICROBIOLOGY  
COURSE OUTLINE**

**1. GENERAL**

<b>SCHOOL</b>	HEALTH SCIENCES		
<b>ACADEMIC UNIT</b>	DEPARTMENT OF PHARMACY		
<b>PARTICIPATING INSTITUTIONS</b>	-		
<b>TITLE of POSTGRADUATE PROGRAM</b>	COSMETOLOGY - PREPARATION AND EVALUATION OF COSMETIC PRODUCTS		
<b>LEVEL</b>	POSTGRADUATE		
<b>COURSE CODE</b>	PHA-COS-21	<b>SEMESTER</b>	B'
<b>COURSE TITLE</b>	QUALITY AND SAFETY TESTING OF COSMETIC PRODUCTS		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>	
Courses	3	6	
<b>COURSE TYPE</b>	Field of Science		
<b>PREREQUISITE COURSES</b>	None		
<b>LANGUAGE of INSTRUCTION and EXAMINATIONS</b>	Greek		
<b>COURSE OFFERED to ERASMUS STUDENTS</b>	No		
<b>COURSE (URL)</b>	<a href="http://www.pharmacy.upatras.gr/images/DS/PHA-COS-21_EN.pdf">http://www.pharmacy.upatras.gr/images/DS/PHA-COS-21_EN.pdf</a>		

**2. LEARNING OUTCOMES**

<b>Learning Outcomes</b>
<p>By the end of this course the student will know</p> <ul style="list-style-type: none"> <li>Techniques for testing the Quality of Cosmetic Products, such as: Physicochemical tests (Organoleptic Characteristics, Control of pH, viscosity, rheological properties,</li> <li>The necessary Stability test protocols</li> <li>The determination of the shelf life of products (Period After Opening, Minimum Shelf Life).</li> <li>The required Cosmetic Product Safety tests.</li> <li>The drafting of a Cosmetic Product Safety Assessment Report, Risk Assessment.</li> </ul>
<b>General Competences</b>
<p>By the end of this course the student will, furthermore, have develop the following general abilities (from the list above):</p> <p><i>Search, analysis and synthesis of data and information, using the necessary technologies</i></p> <p><i>Decision making</i></p> <p><i>Autonomous (Independent) work</i></p> <p><i>Group work</i></p>

### 3. SYLLABUS

#### LECTURES

- Quality Control of Cosmetic Products: Physicochemical tests (Organoleptic Characteristics, Control of pH, viscosity, rheological properties,
- Stability test protocols – Determination of shelf life (Period After Opening, Minimum Shelf Life).
- Cosmetic Product Safety test:
- Cosmetic Product Safety Assessment Report, Risk Assessment.
- In vitro Safety Assessment Methods (eg HET-CAM tests).

### 4. TEACHING and LEARNING METHODS - EVALUATION

<b>DELIVERY</b>	In the classroom	
<b>USE of INFORMATION and COMMUNICATIONS TECHNOLOGY</b>	Learning process support through the e-class electronic platform to exchange files and lectures and to communicate with students. Lectures and presentations are all done using Information and Communication Technologies (ICTs) and information is searched through relevant databases.	
<b>TEACHING METHODS</b>	<b>Activity</b>	<b>Semester Workload</b>
	Lectures	60
	Literature study	50
	Assignment – Presentation of a relevant topic from the international literature	40
	<b>Course Total (25 hours of work-load per ECTS credit)</b>	<b>150</b>
<b>STUDENT PERFORMANCE EVALUATION</b>	Language of Evaluation: Greek	
	1. Written final exam (80%) which includes	
	<ul style="list-style-type: none"> <li>• Short development questions</li> <li>• Critical thinking Questions</li> </ul>	
	2. Assignment – Cosmetic Product Safety test and preparation of a Cosmetic Product Safety Assessment Report (Risk Assessment) (20%)	

### 5. RECOMMENDED BIBLIOGRAPHY

1. Handbook of Cosmetic Science and Technology, André O. Barel, Marc Paye, Howard I. Maibach, eds, Marcel Dekker, Inc. New York • Basel, 2001, ISBN: 0-8247-0292-1
2. Formulas, Ingredients and Production of Cosmetics Technology of Skin- and Hair-Care Products in Japan Hiroshi Iwata, Kunio Shimada eds, Springer Tokyo Heidelberg New York Dordrecht London 2013, ISBN 978-4-431-54060-1
3. New Cosmetic Science T. Mitsui ed, Elsevier the Netherlands 1998, ISBN 0 444 82654 8
4. Chemistry and Technology of the Cosmetics and Toiletries Industry, Williams, D.F., Schmitt W.H eds, Springer Science+ Business Media New York 1992. ISBN 978-94-010-5007-4
5. THE SCCS NOTES OF GUIDANCE FOR THE TESTING OF COSMETIC INGREDIENTS AND THEIR SAFETY EVALUATION



UNIVERSITY OF PATRAS  
SCHOOL OF HEALTH SCIENCES  
DEPARTMENT OF PHARMACY  
POSTGRADUATE PROGRAM: **COSMETOLOGY - PREPARATION AND EVALUATION  
OF COSMETIC PRODUCTS**

COURSE TITLE: EFFICACY TESTING AND CLAIM SUPPORT TECHNIQUES  
CODE: PHA-COS-22

**EFFICACY TESTING AND CLAIM SUPPORT TECHNIQUES  
COURSE OUTLINE**

**1. GENERAL**

<b>SCHOOL</b>	HEALTH SCIENCES		
<b>ACADEMIC UNIT</b>	DEPARTMENT OF PHARMACY		
<b>PARTICIPATING INSTITUTIONS</b>	-		
<b>TITLE of POSTGRADUATE PROGRAM</b>	COSMETOLOGY - PREPARATION AND EVALUATION OF COSMETIC PRODUCTS		
<b>LEVEL</b>	POSTGRADUATE		
<b>COURSE CODE</b>	PHA-COS-22	<b>SEMESTER</b>	B'
<b>COURSE TITLE</b>	EFFICACY TESTING AND CLAIM SUPPORT TECHNIQUES		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>	
Courses	3	6	
<b>COURSE TYPE</b>	Field of Science		
<b>PREREQUISITE COURSES</b>	None		
<b>LANGUAGE of INSTRUCTION and EXAMINATIONS</b>	Greek		
<b>COURSE OFFERED to ERASMUS STUDENTS</b>	No		
<b>COURSE (URL)</b>	<a href="http://www.pharmacy.upatras.gr/images/DS/PHA-COS-22_EN.pdf">http://www.pharmacy.upatras.gr/images/DS/PHA-COS-22_EN.pdf</a>		

**2. LEARNING OUTCOMES**

Learning Outcomes
<p>By the end of this course the student will know the methods of supporting cosmetic product claims and will be able to develop corresponding test protocols and interpret their results. Specifically, students will be able to know</p> <ul style="list-style-type: none"> <li>• The bio-engineering methods of studying various Skin Parameters (Measurement of Hydration, Transepidermal Water Loss, Color, Morphology of the Skin Surface, skin renewal time and the principles of their operation.</li> <li>• Study methods of various parameters of the hair.</li> <li>• The method of measuring the UV Protection Index of Sunscreen Products.</li> <li>• The methods of assessing the provided sun protection against UVA and UVB radiation in vitro</li> <li>• The methods of determining the percentage of water resistance of sunscreen products</li> <li>• How to develop testing protocols in volunteers with non-invasive (bio-engineering) methods.</li> <li>• The statistical processing and presentation of results.</li> </ul>

### General Competences

By the end of this course the student will, furthermore, have developed the following general abilities (from the list above):

*Search, analysis and synthesis of data and information, using the necessary technologies*

*Decision making*

*Autonomous (Independent) work*

*Group work*

### 3. SYLLABUS

#### LECTURES

- Bio-engineering methods for the study of various skin parameters (Measurement of Hydration, Transepidermal Water Loss, Color, Skin Surface Morphology, Epidermal Renewal Time.
- Study methods of various parameters of hair.
- Measurement of the UV Protection Index of Sunscreen Products.
- Review and evaluation of methods for evaluating the photoprotection of sunscreen products - Sun protection index test methods
- Test method for protection against UVB radiation (SPF) in vivo
- Determination of sun protection against UVB radiation in vitro
- UVA sunscreen detection method in vivo
- Determination of sun protection against UVA radiation in vitro

### 4. TEACHING and LEARNING METHODS - EVALUATION

<b>DELIVERY</b>	In the classroom										
<b>USE of INFORMATION and COMMUNICATIONS TECHNOLOGY</b>	Learning process support through the e-class electronic platform to exchange files and lectures and to communicate with students. Lectures and presentations are all done using Information and Communication Technologies (ICTs) and information is searched through relevant databases.										
<b>TEACHING METHODS</b>	<table><thead><tr><th><i>Activity</i></th><th><i>Semester Workload</i></th></tr></thead><tbody><tr><td>Lectures</td><td>60</td></tr><tr><td>Literature study</td><td>50</td></tr><tr><td>Assignment – Presentation of a relevant topic from the international literature</td><td>40</td></tr><tr><td><b>Course Total (25 hours of work-load per ECTS credit)</b></td><td><b>150</b></td></tr></tbody></table>	<i>Activity</i>	<i>Semester Workload</i>	Lectures	60	Literature study	50	Assignment – Presentation of a relevant topic from the international literature	40	<b>Course Total (25 hours of work-load per ECTS credit)</b>	<b>150</b>
<i>Activity</i>	<i>Semester Workload</i>										
Lectures	60										
Literature study	50										
Assignment – Presentation of a relevant topic from the international literature	40										
<b>Course Total (25 hours of work-load per ECTS credit)</b>	<b>150</b>										
<b>STUDENT PERFORMANCE EVALUATION</b>	Language of Evaluation: Greek <ol style="list-style-type: none"><li>1. Written final exam (80%) which includes<ul style="list-style-type: none"><li>• Short development questions</li><li>• Critical thinking Questions</li></ul></li><li>2. Assignment – Development and execution of protocols for non-invasive (bio-engineering) methods and Protocols for Self-Assessment of Product claim support in Volunteers (20%)</li></ol>										

## 5. RECOMMENDED BIBLIOGRAPHY

1. Handbook of Cosmetic Science and Technology, André O. Barel, Marc Paye, Howard I. Maibach, eds, Marcel Dekker, Inc. New York • Basel, 2001, ISBN: 0-8247-0292-1
2. Formulas, Ingredients and Production of Cosmetics Technology of Skin- and Hair-Care Products in Japan Hiroshi Iwata, Kunio Shimada eds, Springer Tokyo Heidelberg New York Dordrecht London 2013, ISBN 978-4-431-54060-1
3. New Cosmetic Science T. Mitsui ed, Elsevier the Netherlands 1998, ISBN 0 444 82654 8
4. Chemistry and Technology of the Cosmetics and Toiletries Industry, Williams, D.F., Schmitt W.H eds, Springer Science+ Business Media New York 1992. ISBN 978-94-010-5007-4
5. THE SCCS NOTES OF GUIDANCE FOR THE TESTING OF COSMETIC INGREDIENTS AND THEIR SAFETY EVALUATION





UNIVERSITY OF PATRAS  
SCHOOL OF HEALTH SCIENCES  
DEPARTMENT OF PHARMACY  
POSTGRADUATE PROGRAM: **COSMETOLOGY - PREPARATION AND EVALUATION  
OF COSMETIC PRODUCTS**

COURSE TITLE: METHODS OF INSTRUMENTAL ANALYSIS FOR COSMETIC PRODUCTS  
CODE: PHA-COS-23

**METHODS OF INSTRUMENTAL ANALYSIS FOR COSMETIC PRODUCTS**  
**COURSE OUTLINE**

**1. GENERAL**

<b>SCHOOL</b>	HEALTH SCIENCES		
<b>ACADEMIC UNIT</b>	DEPARTMENT OF PHARMACY		
<b>PARTICIPATING INSTITUTIONS</b>	-		
<b>TITLE of POSTGRADUATE PROGRAM</b>	COSMETOLOGY - PREPARATION AND EVALUATION OF COSMETIC PRODUCTS		
<b>LEVEL</b>	POSTGRADUATE		
<b>COURSE CODE</b>	PHA-COS-23	<b>SEMESTER</b>	B'
<b>COURSE TITLE</b>	METHODS OF INSTRUMENTAL ANALYSIS FOR COSMETIC PRODUCTS		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>	
Courses	3	6	
<b>COURSE TYPE</b>	Field of Science		
<b>PREREQUISITE COURSES</b>	None		
<b>LANGUAGE of INSTRUCTION and EXAMINATIONS</b>	Greek		
<b>COURSE OFFERED to ERASMUS STUDENTS</b>	No		
<b>COURSE (URL)</b>	<a href="http://www.pharmacy.upatras.gr/images/DS/PHA-COS-23_EN.pdf">http://www.pharmacy.upatras.gr/images/DS/PHA-COS-23_EN.pdf</a>		

**2. LEARNING OUTCOMES**

<b>Learning Outcomes</b>
<p>By the end of this course the student will know the methods of supporting cosmetic product claims and will be able to develop corresponding test protocols and interpret their results. Specifically, students will be able to know</p> <ul style="list-style-type: none"> <li>• the increased requirements at the level of quality control and quality assurance of cosmetic products</li> <li>• the procedures followed during the management of samples for the qualitative and quantitative determination of active substances, excipients and impurities in the various cosmetic forms</li> <li>• the analytical techniques used for the same purpose</li> <li>• how to solve problems related to the analysis of dangerous and prohibited impurities</li> <li>• develop and validate analytical methodologies.</li> </ul>

## General Competences

By the end of this course the student will, furthermore, have develop the following general abilities (from the list above):

*Decision making*

*Autonomous (Independent) work*

*Group work*

### 3. SYLLABUS

#### LECTURES

- Instrumental techniques used in the analysis of cosmetic products. Theoretical Background, Principle of operation. Ultraviolet-Visible Spectroscopy, Infrared Spectroscopy, Atomic Absorption and Emission Spectroscopy, X-Ray Fluorescence Spectroscopy, Liquid Chromatography, Gas Chromatography, Mass Spectrometry.
- Applications of these techniques in the determination of preservatives (parabens), antioxidants, pigments, phthalates, formaldehyde, nitrosamines, allergens, UV filters, heavy metals in cosmetics.
- Preparation of samples of cosmetic products for analysis (Liquid extraction, solid phase extraction).
- Errors of analytical methods. Reliability of measurements. Analytical method validation.

### 4. TEACHING and LEARNING METHODS - EVALUATION

<b>DELIVERY</b>	In the classroom										
<b>USE of INFORMATION and COMMUNICATIONS TECHNOLOGY</b>	Learning process support through the e-class electronic platform to exchange files and lectures and to communicate with students. Lectures and presentations are all done using Information and Communication Technologies (ICTs) and information is searched through relevant databases.										
<b>TEACHING METHODS</b>	<table><thead><tr><th><i>Activity</i></th><th><i>Semester Workload</i></th></tr></thead><tbody><tr><td>Lectures</td><td>60</td></tr><tr><td>Literature study</td><td>50</td></tr><tr><td>Assignment – Presentation of a relevant topic from the international literature</td><td>40</td></tr><tr><td><b>Course Total (25 hours of work-load per ECTS credit)</b></td><td><b>150</b></td></tr></tbody></table>	<i>Activity</i>	<i>Semester Workload</i>	Lectures	60	Literature study	50	Assignment – Presentation of a relevant topic from the international literature	40	<b>Course Total (25 hours of work-load per ECTS credit)</b>	<b>150</b>
<i>Activity</i>	<i>Semester Workload</i>										
Lectures	60										
Literature study	50										
Assignment – Presentation of a relevant topic from the international literature	40										
<b>Course Total (25 hours of work-load per ECTS credit)</b>	<b>150</b>										
<b>STUDENT PERFORMANCE EVALUATION</b>	Language of Evaluation: Greek <ol style="list-style-type: none"><li>1. Written final exam (80%) which includes<ul style="list-style-type: none"><li>• Short development questions</li><li>• Critical thinking Questions</li></ul></li><li>2. Assignment – Presentation of an analytical problem from the international literature (20%)</li></ol>										

## 5. RECOMMENDED BIBLIOGRAPHY

1. Analysis of Cosmetic Products, Amparo Salvado, Alberto Chisvert, Elsevier, 2nd Edition, 2017.
2. ΕΝΟΡΓΑΝΗ ΑΝΑΛΥΣΗ, ΘΕΜΙΣΤΟΚΛΗΣ Π. ΧΑΤΖΗΪΩΑΝΝΟΥ, ΜΙΧΑΗΛ Α. ΚΟΥΠΠΑΡΗΣ , 2014
3. ΕΝΟΡΓΑΝΗ ΧΗΜΙΚΗ ΑΝΑΛΥΣΗ, Ι. ΠΑΠΑΔΟΓΙΑΝΝΗΣ-Β. ΣΑΜΑΝΙΔΟΥ, 2η Έκδοση, Θεσσαλονίκη, 2011.
4. Φαρμακευτική ανάλυση, D.G. WATSON, , Επιμέλεια Ελληνικής Έκδοσης: Μ. Κουππάρης, Εκδόσεις Παρισιάνου, 2011.
5. ΘΕΜΕΛΙΩΔΕΙΣ ΑΡΧΕΣ ΑΝΑΛΥΤΙΚΗΣ ΧΗΜΕΙΑΣ, ΣΚΟΟΓ, D. A. Skoog, D. M. West, F. James Holler, S. R. Crouch, Επιμέλεια Ελληνικής Έκδοσης: Μ. Ι. Καραγιάννης, Κ. Η. Ευσταθίου, Εκδόσεις Κωσταράκη, 2016



UNIVERSITY OF PATRAS  
SCHOOL OF HEALTH SCIENCES  
DEPARTMENT OF PHARMACY  
POSTGRADUATE PROGRAM: **COSMETOLOGY - PREPARATION AND EVALUATION  
OF COSMETIC PRODUCTS**

COURSE TITLE: INDUSTRIAL PRODUCTION OF COSMETIC PRODUCTS  
CODE: PHA-COS-24

**INDUSTRIAL PRODUCTION OF COSMETIC PRODUCTS**  
**COURSE OUTLINE**

**1. GENERAL**

<b>SCHOOL</b>	HEALTH SCIENCES		
<b>ACADEMIC UNIT</b>	DEPARTMENT OF PHARMACY		
<b>PARTICIPATING INSTITUTIONS</b>	-		
<b>TITLE of POSTGRADUATE PROGRAM</b>	COSMETOLOGY - PREPARATION AND EVALUATION OF COSMETIC PRODUCTS		
<b>LEVEL</b>	POSTGRADUATE		
<b>COURSE CODE</b>	PHA-COS-24	<b>SEMESTER</b>	B'
<b>COURSE TITLE</b>	INDUSTRIAL PRODUCTION OF COSMETIC PRODUCTS		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>	
Courses	3	6	
<b>COURSE TYPE</b>	Field of Science		
<b>PREREQUISITE COURSES</b>	None		
<b>LANGUAGE of INSTRUCTION and EXAMINATIONS</b>	Greek		
<b>COURSE OFFERED to ERASMUS STUDENTS</b>	No		
<b>COURSE (URL)</b>	<a href="http://www.pharmacy.upatras.gr/images/DS/PHA-COS-24_EN.pdf">http://www.pharmacy.upatras.gr/images/DS/PHA-COS-24_EN.pdf</a>		

**2. LEARNING OUTCOMES**

<b>Learning Outcomes</b>
<p>By the end of this course the student will know</p> <ul style="list-style-type: none"> <li>• The methods of Industrial Production of Cosmetic Products (Factory Organization for the Production of Cosmetic Products, Process Planning, Material and Personnel Flow, Quality Assurance, Process Design and Validation)</li> <li>• The Good Manufacturing Practices (GMP), as described in the European Harmonized Standard ISO 22716:2007 concerning the production of cosmetic products.</li> </ul>
<b>General Competences</b>
<p>By the end of this course the student will, furthermore, have develop the following general abilities (from the list above):</p> <p><i>Search, analysis and synthesis of data and information, using the necessary technologies</i> <i>Decision making</i> <i>Autonomous (Independent) work</i> <i>Group work</i></p>

### 3. SYLLABUS

LECTURES
<ul style="list-style-type: none"> <li>• Methods of Industrial Production of Cosmetic Products (Factory Organization for the Production of Cosmetic Products, Process Planning, Material and Personnel Flow, Quality Assurance, Process Design and Validation)</li> <li>• GMP guidelines</li> <li>• ISO 22716:2007.</li> </ul>

### 4. TEACHING and LEARNING METHODS - EVALUATION

<b>DELIVERY</b>	In the classroom										
<b>USE of INFORMATION and COMMUNICATIONS TECHNOLOGY</b>	Learning process support through the e-class electronic platform to exchange files and lectures and to communicate with students. Lectures and presentations are all done using Information and Communication Technologies (ICTs) and information is searched through relevant databases.										
<b>TEACHING METHODS</b>	<table border="0"> <tr> <td><b>Activity</b></td> <td style="text-align: right;"><b>Semester Workload</b></td> </tr> <tr> <td>Lectures</td> <td style="text-align: right;">60</td> </tr> <tr> <td>Literature study</td> <td style="text-align: right;">50</td> </tr> <tr> <td>Assignment – Presentation of a relevant topic from the international literature</td> <td style="text-align: right;">40</td> </tr> <tr> <td><b>Course Total (25 hours of work-load per ECTS credit)</b></td> <td style="text-align: right;"><b>150</b></td> </tr> </table>	<b>Activity</b>	<b>Semester Workload</b>	Lectures	60	Literature study	50	Assignment – Presentation of a relevant topic from the international literature	40	<b>Course Total (25 hours of work-load per ECTS credit)</b>	<b>150</b>
<b>Activity</b>	<b>Semester Workload</b>										
Lectures	60										
Literature study	50										
Assignment – Presentation of a relevant topic from the international literature	40										
<b>Course Total (25 hours of work-load per ECTS credit)</b>	<b>150</b>										
<b>STUDENT PERFORMANCE EVALUATION</b>	<p>Language of Evaluation: Greek</p> <p>Written final exam which includes</p> <ul style="list-style-type: none"> <li>• Short development questions</li> <li>• Critical thinking Questions</li> </ul>										

### 5. RECOMMENDED BIBLIOGRAPHY

<ol style="list-style-type: none"> <li>1. Handbook of Cosmetic Science and Technology, André O. Barel, Marc Paye, Howard I. Maibach, eds, Marcel Dekker, Inc. New York • Basel, 2001, ISBN: 0-8247-0292-1</li> <li>2. Formulas, Ingredients and Production of Cosmetics Technology of Skin- and Hair-Care Products in Japan Hiroshi Iwata, Kunio Shimada eds, Springer Tokyo Heidelberg New York Dordrecht London 2013, ISBN 978-4-431-54060-1</li> <li>3. New Cosmetic Science T. Mitsui ed, Elsevier the Netherlands 1998, ISBN 0 444 82654 8</li> <li>4. Chemistry and Technology of the Cosmetics and Toiletries Industry, Williams, D.F., Schmitt W.H eds, Springer Science+ Business Media New York 1992. ISBN 978-94-010-5007-4</li> </ol>
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6.



UNIVERSITY OF  
**PATRAS**  
ΠΑΝΕΠΙΣΤΗΜΙΟ ΠΑΤΡΩΝ

DEPARTMENT OF PHARMACY

SCHOOL OF HEALTH SCIENCES

UNIVERSITY OF PATRAS

SCHOOL OF HEALTH SCIENCES

DEPARTMENT OF PHARMACY

POSTGRADUATE PROGRAM: **COSMETOLOGY - PREPARATION AND EVALUATION  
OF COSMETIC PRODUCTS**

COURSE TITLE: PRACTICAL COURSE ON PREPARATION OF COSMETIC PRODUCTS

CODE: PHA-COS-25



**PRACTICAL COURSE ON PREPARATION OF COSMETIC PRODUCTS**  
**COURSE OUTLINE**

**1. GENERAL**

<b>SCHOOL</b>	HEALTH SCIENCES		
<b>ACADEMIC UNIT</b>	DEPARTMENT OF PHARMACY		
<b>PARTICIPATING INSTITUTIONS</b>	-		
<b>TITLE of POSTGRADUATE PROGRAM</b>	COSMETOLOGY - PREPARATION AND EVALUATION OF COSMETIC PRODUCTS		
<b>LEVEL</b>	POSTGRADUATE		
<b>COURSE CODE</b>	PHA-COS-25	<b>SEMESTER</b>	B'
<b>COURSE TITLE</b>	PRACTICAL COURSE ON PREPARATION OF COSMETIC PRODUCTS		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>	
Courses	3	6	
<b>COURSE TYPE</b>	Field of Science		
<b>PREREQUISITE COURSES</b>	None		
<b>LANGUAGE of INSTRUCTION and EXAMINATIONS</b>	Greek		
<b>COURSE OFFERED to ERASMUS STUDENTS</b>	No		
<b>COURSE (URL)</b>	<a href="http://www.pharmacy.upatras.gr/images/DS/PHA-COS-25_EN.pdf">http://www.pharmacy.upatras.gr/images/DS/PHA-COS-25_EN.pdf</a>		

**2. LEARNING OUTCOMES**

<b>Learning Outcomes</b>
<p>By the end of this course the student will know the technique of preparing various cosmetic formulations, such as:</p> <ul style="list-style-type: none"> <li>• Creams</li> <li>• Lotions</li> <li>• Sunscreens</li> <li>• Makeup products</li> <li>• Shaving products</li> <li>• Cosmetic soaps</li> <li>• Shampoos</li> <li>• Toothpastes &amp; Mouthwashes</li> </ul>

## General Competences

By the end of this course the student will, furthermore, have developed the following general abilities (from the list above):

*Search, analysis and synthesis of data and information, using the necessary technologies*

*Decision making*

*Autonomous (Independent) work*

*Group work*

### 3. SYLLABUS

#### LECTURES

- Laboratory exercises in the preparation of cosmetic products such as:
  - Vanishing day cream
  - Moisturizing body lotion
  - Vitamin cream
- Sunscreen oil,
- Sunscreen emulsion
- Regulating shampoo - Baby shampoo
- Makeup products (powder, lipstick, mascara)
- Shaving products (Shaving foam, Shaving creams, Colognes, Aftershaves)
- Cosmetic soaps
- Toothpaste - Toothpaste - Mouthwash

### 4. TEACHING and LEARNING METHODS - EVALUATION

<b>DELIVERY</b>	In the classroom	
<b>USE of INFORMATION and COMMUNICATIONS TECHNOLOGY</b>	Learning process support through the e-class electronic platform to exchange files and lectures and to communicate with students. Lectures and presentations are all done using Information and Communication Technologies (ICTs) and information is searched through relevant databases.	
<b>TEACHING METHODS</b>	<b>Activity</b>	<b>Semester Workload</b>
	Laboratory exercise	100
	Literature study	50
	<b>Course Total (25 hours of work-load per ECTS credit)</b>	<b>150</b>
<b>STUDENT PERFORMANCE EVALUATION</b>	Language of Evaluation: Greek  Written final exam which includes <ul style="list-style-type: none"><li>• Short development questions</li><li>• Critical thinking Questions</li></ul>	

## 5. RECOMMENDED BIBLIOGRAPHY

1. Handbook of Cosmetic Science and Technology, André O. Barel, Marc Paye, Howard I. Maibach, eds, Marcel Dekker, Inc. New York • Basel, 2001, ISBN: 0-8247-0292-1
2. Formulas, Ingredients and Production of Cosmetics Technology of Skin- and Hair-Care Products in Japan Hiroshi Iwata, Kunio Shimada eds, Springer Tokyo Heidelberg New York Dordrecht London 2013, ISBN 978-4-431-54060-1
3. New Cosmetic Science T. Mitsui ed, Elsevier the Netherlands 1998, ISBN 0 444 82654 8
4. Chemistry and Technology of the Cosmetics and Toiletries Industry, Williams, D.F., Schmitt W.H eds, Springer Science+ Business Media New York 1992. ISBN 978-94-010-5007-4



UNIVERSITY OF PATRAS  
SCHOOL OF HEALTH SCIENCES  
DEPARTMENT OF PHARMACY  
POSTGRADUATE PROGRAM: **COSMETOLOGY - PREPARATION AND EVALUATION  
OF COSMETIC PRODUCTS**

COURSE TITLE: DIPLOMA THESIS  
CODE: PHA-COS-31

**DIPLOMA THESIS  
COURSE OUTLINE**

**1. GENERAL**

<b>SCHOOL</b>	HEALTH SCIENCES		
<b>ACADEMIC UNIT</b>	DEPARTMENT OF PHARMACY		
<b>PARTICIPATING INSTITUTIONS</b>	-		
<b>TITLE of POSTGRADUATE PROGRAM</b>	COSMETOLOGY - PREPARATION AND EVALUATION OF COSMETIC PRODUCTS		
<b>LEVEL</b>	POSTGRADUATE		
<b>COURSE CODE</b>	PHA-COS-31	<b>SEMESTER</b>	C'
<b>COURSE TITLE</b>	DIPLOMA THESIS		
<b>INDEPENDENT TEACHING ACTIVITIES</b>	<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>	
Laboratory Work	-	30	
<b>COURSE TYPE</b>	Field of Science (Cosmetic Technology) and Skills Development		
<b>PREREQUISITE COURSES</b>	None		
<b>LANGUAGE of INSTRUCTION and EXAMINATIONS</b>	Greek		
<b>COURSE OFFERED to ERASMUS STUDENTS</b>	No		
<b>COURSSE (URL)</b>	<a href="http://www.pharmacy.upatras.gr/images/DS/PHA-COS-31_EN.pdf">http://www.pharmacy.upatras.gr/images/DS/PHA-COS-31_EN.pdf</a>		

**2. LEARNING OUTCOMES**

<b>Learning Outcomes</b>
By the end of this course the student will be able to know in depth the subject assigned to them. They will also be able to organize and carry out an experimental work, process and present the results of this work.
<b>General Competences</b>
By the end of this course the student will, furthermore, have develop the following general abilities (from the list above): <i>Decision making</i> <i>Autonomous (Independent) work</i> <i>Group work</i> <i>Work in an interdisciplinary environment</i>

*Generation of new research ideas*  
*Project planning and management*  
*Exercise of criticism and self-criticism*  
*Promotion of free, creative and inductive thinking*

### 3. SYLLABUS

The postgraduate students of the course will prepare an original one-semester laboratory thesis on topics related to the development, production and evaluation of cosmetic products under the guidance of the Teaching Professors

### 4. TEACHING and LEARNING METHODS - EVALUATION

<b>DELIVERY</b>	In the classroom and visits to cosmetic and pharmaceutical production sites	
<b>USE of INFORMATION and COMMUNICATIONS TECHNOLOGY</b>	Learning process support through the e-class electronic platform to exchange files and lectures and to communicate with students. Lectures and presentations are all done using Information and Communication Technologies (ICTs) and information is searched through relevant databases.	
<b>TEACHING METHODS</b>	<b>Activity</b>	<b>Semester Workload</b>
	Study conduct	400
	Literature searching and analysis	150
	Thesis writing	200
	<b>Course Total (25 hours of work-load per ECTS credit)</b>	<b>750</b>
<b>STUDENT PERFORMANCE EVALUATION</b>	<p>Public Presentation of the research study (Diploma Thesis, DE) and grading by a three-member Examination Committee.</p> <p>The grading of the DE is based on the evaluation of the quality of the research and the candidate's ability to understand, analyze and present it.</p> <p>Points that are taken under consideration are the methodological adequacy, the satisfactory presentation of results, the critical ability, the originality (if present, but not necessary), the bibliographic completeness and correct use of language.</p> <p>The procedure is described in detail in the Operating Regulations of Postgraduate course "COSMETOLOGY - PREPARATION AND EVALUATION OF COSMETIC PRODUCTS".</p>	

### 5. RECOMMENDED BIBLIOGRAPHY

Relevant of the Diploma Thesis