Academic Reference Standards (ARS)
For
Cosmetic Products Diploma
(*Pharmaceutics*)

Name of the Dept.: Pharmaceutics

قسم الصيدلانيات
Department of Pharmaceutics

ARS

Academic Year: 2021/2022

Head of Department

Prof Dr. Irhan Ibrahim Abu Hashim

Cosmetic Products Diploma

Academic Reference Standards (ARS)

(Department Council Approval on 15/5/2022)

(Faculty Council Approval on 5/2022)

Cosmetics Diploma

The Academic Reference Standard (ARS) for cosmetics diploma regarding attributes and capabilities of the graduates were based on the General Academic Reference Standards of graduate studies published by the national Authority for Quality Assurance and Accreditation of Education. The following Specific Academic Standards for this program were approved by the Department Council 7 March 2021 and Faculty Council 20 March 2021.

I. Attributes of the graduate:

By the end of the study the Diploma's program, agraduate must be able to:

- Develop analytical and critical appraisal skills in theory and research related to cosmetics.
- Articulate professional decisions, incorporating evidence-based rationale, in a variety of diverse and complex situations related to cosmetics.
- Apply advanced statistical analysis and microbiological evaluation.
- Apply professional responsibility, integrity, and ethics in cosmetics.

II. General Standards

1. Knowledge and Understanding:

Upon successful completion of the Program, graduates should be able to:

1.1. Identify, recognize and describe the evidence base underpinning cosmetics.

1.2. Illustrate knowledge and understanding of the wider contexts within which cosmetics.

1.3. Distinguish the depth and breadth of knowledge in relation to current developments in cosmetics incorporating microbiological evaluation وstatistical analysis and clinical studies.

2. Intellectual Skills

Upon successful completion of the Program, graduates should be qualified to:

2.1. Interpret and predict problematic situations in cosmetics that involve many interacting factors and their treatment.

2.2. Evaluate self-direction, reflection and creativity in tackling and solving complex cosmetics problems.

2.3. Adapt independent learning skills to sift, analyse and synthesise the knowledge and enquiry underpinning cosmetics formulations, microbiological evaluation and statistical analysis.

3. Professional and Practical Skills

Upon completion of the program, graduates should be able to

3.1. Utilize judgement in selectively implementing research using a critically informed evidence base, dissemination strategy and quality control assessment.

3.2. Analyze current and potential treatments taking into account the complexities and subtleties of cosmetics.

4. General and transferable skills:

Upon completion of the program, graduates should be able to:

4.1. Retrieve and evaluate information from different sources to improve professional competencies.

4.2. Effectively use numeracy, calculation, and statistical methods as well as microbiological evaluation.

4.3. Demonstrate critical thinking, problem-solving and decision-making abilities.

Program: Cosmetic Products Diploma

Department of Pharmaceutics

Program Specification

Academic Year: ***2021/2022***

Head of Department

Prof. Dr. Irhan Ibrahim Abu Hashim

A-Basic Inforation

1	**Faculty**	**Pharmacy**
2	**Program Title:**	**Cosmetic Products Diploma**
3	**Program Type:**	**Diploma**
4	**Department (s):**	**Department of Pharmaceutics**
5	**Final award:**	**Diploma in Cosmetic Products**
6	**Coordinator:**	**Asist Prof . Dr. Marwa Salah El-Dahhan**
7	**External Evaluator(s):**	
8	**Date of Program Specification Approval:**	***Department council: 15/5/2022***

B-Professional Information

1-Program Aims

Upon successful completion of the program, graduates should demonstrate comprehensive knowledge, clear understanding and outstanding skills in pharmaceutical sciences and cosmetic products.

1.1	Gain the basics and comprehensive theoretical information of some natural herbal principles, advanced drug delivery systems, reaction kinetics, statistical analysis, release behavior besides forms of instability of different cosmetic products.
1.2	Recognize the current issues in classification, preparation, evaluation, delivery, targeting and packaging of recent and advanced cosmetic products.
1.3	Master adequate range of specialized professional skills to prepare, pack, store, evaluate and use different cosmetic products.
1.4	Adopt the scientific thinking approaches in subjects relevant to bioavailability and stability improvement of cosmetic products.
1.5	Identify different in vitro tests, microbiological quality control as well as clinical methods in evaluating cosmetics.
1.6	Provide the ability to critically analyze the impact and outcomes of different animal models for cosmetic products assessment and their correlation with humans.
1.7	Understand the characteristics of potential sites for drug delivery including the skin.

1.8	Communicate effectively and having ability to participate and lead team-works.

2-Intended Learning Outcomes (ILOs)

A- Knowledge and Understanding:

By the end of this program the graduate should be able to:

A1	Explain the theories, basic principles, fundamentals, advantages and disadvantages of different techniques used for cosmetic products formulation.
A2	List the different phytomedicines, natural raw materials and additives used in cosmetic preparations besides requirements and types of packaging materials.
A3	Define the principles regarding the optimum storage of cosmetics.
A4	Identify the anatomy, physiology as well as biochemistry of both skin and hair, besides the different types of skin care, skin cure, hair care and hair cure preparations and their different applications.
A5	Describe the ability to develop a variety of drug delivery systems to be used via different routes of administration.
A6	Define the principles and new strategies in the fields of biotechnology, targeted drug delivery as well as bioavailability and stability improvement.
A7	Recognize the importance of statistical analysis and kinetic analysis, besides correct interpretation of such obtained data.
A8	Illustrate the different in vitro and microbiological evaluation tests besides quality control assessments of cosmetic products.
A9	State the different animal and human models besides the clinical methods to evaluate cosmetic products.
A10	Discuss the basic outlines regarding professional scientific research, characteristics of good scientific writing besides adequate citation skills.

B- Intellectual Skills

By the end of this program the graduate should be able to:

B1	Determine important concepts involved in the selection of phytomedicines, natural raw materials and additives suitable for formulation of cosmetic products.
B2	Compare and select the proper and recent technique for preparation of different, new as well as

	targeted drug delivery systems in cosmeceutical field.
B3	Analyze drug delivery problems and instability ones effectively, and correctly suggest possible approaches to overcome such problems.
B4	Select the proper experimental methods for in vitro evaluation, microbiological assay and quality control assessments of cosmetics.
B5	Specify the suitable animal models and/or clinical methods for cosmetic products' photo allergy assessment.
B6	Differentiate between types of degradation reactions and factors affecting these reactions.
B7	Assess the rate of degradation reaction and the kinetic order describing such degradation reaction.
B8	Conduct appropriate mathematical analysis to determine the half-life and shelf life of cosmetic products.
B9	Solve the problems regarding containers, spoilage mechanisms of packaging, quality parameters and Good Manufacturing Practice Elements (GMP) based on a scientific background.
B10	Analyze statistically as well as assess the validity of the obtained results.
B11	Design the research results professionally in a clear, concise, accurate and objective manner.

C- Professional and Practical Skills

By the end of this program the graduate should be able to:

C1	Apply the principles of drug design to formulate different cosmetic preparations using natural raw materials to be used in different fields.
C2	Employ laboratory experiments to develop and formulate new controlled and/or sustained release as well as targeted drug delivery systems to be used effectively in the cosmeceutical field, with an awareness of good laboratory practice and quality control assessments.
C3	Utilize the information in the field of advanced trends in the evaluation of the developed cosmetic products either by using in vitro assay methods, microbiological assays, animal models and/or clinical methods.
C4	Perform laboratory tests to recognize the suitable storage conditions, evaluate the stability of the cosmetic products and ensure the suitability of their containers as well as packaging

	materials.
C5	Examine the climatic hazards of distribution study.
C6	Perform scientific research, write professional reports, discuss and contribute to the knowledge in the cosmeceutical field.
C7	Complete research data collection and prepare them for statistical processing.
C8	Carry out scientific research and write professional reports.

D- General and Transferable Skills

By the end of this program the graduate should be able to:

D1	Motivate students to work effectively and independently in a team.
D2	Demonstrate time management ability.
D3	Retrieve and evaluate information using modern technology.
D4	Communicate research results effectively and present data clearly through oral presentations at scientific seminars and other venues.
D5	Develop self-education skills.
D6	Identify and solve obstacles and problems, and finding the proper solution.
D7	Use effectively computer programs, online database and different information resources relevant to formulation and evaluation technologies for cosmetic products.
D8	Demonstrate data and facts available for scientific research.

Reference Standards (ARS):

Approved by both the department and faculty councils
Department Council Approval Date: 14/11/2021,
Faculty Council Approval Date: 14/11/2021

3a- Academic References Standards: (**Attached**)

3b-Comparison of provision to External References

Achievement of academic reference standards via program Intended Learning Outcomes.

ILOs	ARS	Program
1. **Knowledge and Understanding**	**1.1**	A1, A2, A3, A4
	1.2	A5, A6
	1.3	A7, A8, A9, A10
2. **Intellectual Skills**	**2.1**	B1, B2, B6, B7
	2.2	B3, B5, B9
	2.3	B4, B8, B10

3. **Professional and Practical Skills**	**3.1**	C1, C2, C5, C6
	3.2	C3, C4, C7
4. **General and Transferable Skills**	**4.1**	D1, D2, D3, D4
	4.2	D8
	4.3	D5, D6, D7

4-Curriculum Structure and Contents

4A. Program duration: 1 year.

4B. Program structure:

a- The program consists of 24 credit hours of study divided over two semesters. A graduation project is included with 2 credit hours.

b- All courses possess the code number [100], According to Faculty By-Law.

c. A scientific graduation project of 2 credit hours represents a main component of the program. It is achieved in a subject assigned by the academic supervisor, endorsed by the department council, the committee of graduate studies & research and the faculty council.

4C. Program Components

1- Courses according to the By-law

Code number	Name of the course	Type	Credit Hours	Semester
(PTD–B101)	**Technology of Cosmetic Products**	Compulsory	3	Fall
(PTD–B102)	**Natural Ingredients in Cosmetics**	Compulsory	3	Fall
(PTD–B103)	**Skin Histology and Medical Applications**	Compulsory	3	Fall
(PTD–B104)	**Stability and Storage of Cosmetics**	Compulsory	3	Fall
(PTD–B105)	**Advanced Drug Delivery Systems**	Compulsory	3	Spring
(PTD–B106)	**Microbial Quality Control and Quality Assurance of Cosmetics**	Compulsory	3	Spring
(PTD–B107)	**Pharmaceutical Evaluation of Cosmetics**	Compulsory	2	Spring
(PTD–B109)	**Packaging and packaging Materials**	elective	2	Spring
Total (Courses)			22	
	Graduation project		2	
Total			24	

5- Program Courses

1- Achievement of Program Intended Learning Outcomes via the courses

Course	C.H/ week	Program ILOs (by No.)			
		K.U*	IS**	P.P.S***	G.T.S****
First Semester *(12 C.H.)*					
Technology of Cosmetic Products (PTD–B101)	**3**	A1, A4, A8, A9	B1, B2, B5	C1, C2, C3	D1, D2, D3, D5, D6, D7
Natural Ingredients in Cosmetics (PTD–B102)	**3**	A2	B1	C1	D1, D2, D3, D5, D6, D7
Skin Histology and Medical Applications (PTD–B103)	**3**	A4	B5	C2	D1, D2, D3, D5, D6, D7
Stability and Storage of Cosmetics (PTD–B104)	**3**	A3, A6	B3, B6, B7, B8	C4, C5	D1, D2, D3, D5, D6, D7
Total	**12**				
Second Semester *(12 C.H.)*					
Advanced Drug Delivery Systems (PTD–B105)	**3**	A1, A5, A6	B1, B2	C2, C3	D1, D2, D3, D5, D6, D7
Microbial Quality Control and Quality Assurance of Cosmetics (PTD–B106)	**3**	A8	B4, B9	C2, C3	D1, D2, D3, D5, D6, D7
Pharmaceutical Evaluation of Cosmetics (PTD–B107)	**2**	A7, A9	B4, B5	C3, C4	D1, D2, D3, D5, D6, D7
Packaging and packaging Materials (PTD–B109)	**2 (E)**	A2	B9	C4	D1, D2, D3, D5, D6, D7
Graduation Project (PTD–B1GP)	**2**	A5, A6, A7, A10	B3, B4, B5, B7, B8, B10, B11	C2, C3, C6, C7, C8	D1, D2, D3, D4, D5, D6, D7, D8
Total	**12**				
Total	**24**				

* ***K**nowledge and **U**nderstanding* ** ***I**ntellectual **S**kills*
******Professional and Practical Skills***
**** ***G**eneral and **T**ransferable **S**kills* **(E)** ***Elective course***

Code	Course title	K.U*										IS**										
		A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11
(PTD–B101)	*Technology of Cosmetic Products*	√			√				√	√		√	√			√						
(PTD–B102)	*Natural Ingredients in Cosmetics*		√									√										
(PTD–B103)	*Skin Histology and Medical Applications*				√											√						
(PTD–B104)	*Stability and Storage of Cosmetics*			√			√							√			√	√	√			
(PTD–B105)	*Advanced Drug Delivery Systems*	√				√	√					√	√									
(PTD–B106)	*Microbial Quality Control and Quality Assurance of Cosmetics*								√						√					√		
(PTD–B107)	*Pharmaceutical Evaluation of Cosmetics*							√		√					√	√						
(PTD–B109)	*Packaging and packaging Materials (E)*		√																	√		
(PTD–B1GP)	*Graduation Project*					√	√	√						√	√	√		√	√		√	√

* ***K**nowledge and **U**nderstanding.* ** ***I**ntellectual **S**kills*

E ***Elective Course***

Code	Course title	P.P.S***	G.T.S****

		C1	C2	C3	C4	C5	C6	C7	C8	D1	D2	D3	D4	D5	D6	D7	D8
(PTD–B101)	***Technology of Cosmetic Products***	√	√	√						√	√	√		√	√	√	
(PTD–B102)	***Natural Ingredients in Cosmetics***	√								√	√	√		√	√	√	
(PTD–B103)	***Skin Histology and Medical Applications***		√							√	√	√		√	√	√	
(PTD–B104)	***Stability and Storage of Cosmetics***				√	√				√	√	√		√	√	√	
(PTD–B105)	***Advanced Drug Delivery Systems***		√	√						√	√	√		√	√	√	
(PTD–B106)	***Microbial Quality Control and Quality Assurance of Cosmetics***		√	√						√	√	√		√	√	√	
(PTD–B107)	***Pharmaceutical Evaluation of Cosmetics***			√	√					√	√	√		√	√	√	
(PTD–B109)	***Packaging and packaging Materials (E)***				√					√	√	√		√	√	√	
(PTD–B1GP)	***Graduation Project***		√	√			√	√	√	√	√	√	√	√	√	√	√

*** ***P**rofessional and **P**ractical **S**kills*

**** ***G**eneral and **T**ransferable **S**kills*

E ***Elective Course***

6- Student Assessment Methods

6.1- Written exam	To assess Knowledge and Understanding and Intellectual Skills
6.2- Oral exam	To assess Knowledge and Understanding, Intellectual Skills and General and transferable Skills
6-3- Practical exam	Knowledge and Understanding, Intellectual Skills, Professional and practical Skills & General and Transferable Skills
6-4- Graduation Project (Written exam)	Knowledge and Understanding, Intellectual Skills, Professional and practical Skills & General and Transferable Skills
6.5- Graduation Project (Presentation and discussion)	Knowledge and Understanding, Intellectual Skills, Professional and practical Skills & General and Transferable Skills

7- Program Admission Requirements

7.1- The candidate should hold a bachelor degree in pharmacy from any Faculty of Pharmacy in Egypt, Arab or foreign countries recognized by the Supreme Council of Universities with minimum general grade of "**Good**". It is possible to enroll foreign students with general grade "**Good**" according to the rules determined by the Supreme Council of Universities

7.2- The candidate should be available for study at least two days per week throughout the duration of study.

7.3- The candidate should follow postgraduate rules of by-law (**2014**) and its modified by-law **(2017)** of Faculty of Pharmacy-Mansoura University.

8- Regulations for progression and program completion

8.1- The study period is one year of two semesters in addition to the Summer semester according to schedules determined by the faculty council.

8.2- The student has to pass the assigned courses included the graduation project for complete fulfilment of the diploma degree.

8.3- The faculty council should cancel the student enrollment if he does not gain the diploma degree in 3 years.

8.4- The candidate should follow postgraduate rules of by-law (**2014**) and its modified by-law **(2017)** of Faculty of Pharmacy-Mansoura University.

9- Facilities Required for Education and Research:

9.1- Suitable halls for lectures containing computers, internet and data show.

9.2- Library and digital library supplied by recent scientific books and journals.

9.3- Laboratories with enough chemicals, apparatus and advanced instruments.

9.4- Access to research engines for scientific periodicals in the field of *specialization*.

9.5- Sufficient number of staff members, demonstrators and technicians.

10- Graduation project

A graduation project should be prepared by the student for complete fulfillment of the Diploma certificate.

11- Evaluation of program

Evaluator	Method	Sample
Internal evaluator	Program evaluation Courses evaluation	Program report Courses report
External evaluator	Program evaluation Courses evaluation	Program report Courses report
Stakeholders	Questionnaires	To be Attached
Postgraduates	Questionnaires	To be Attached
Self-evaluation	Matrices	To be Attached
Supervisor and defence committee of graduation project	Evaluation Sheet	Evaluation sheet of staff members of committee

11- Signature:

Course Coordinator	Head of Department	Date*
Asist .Prof. Dr. Marwa Salah El-Dahhan	Prof. Dr. Irhan Ibrahim Abu Hashim	15/5/2022

* Date of Dept. Council Approval

Annex 1

Attach courses and thesis specifications.

Department of Pharmaceutics

Program: Cosmetic Products Diploma (PTD-B100)

(*Pharmaceutics*)

Course Specification

Academic year: 2021/2022

البرنامج **الحصول دبلوم مستحضرات التجميل**	**توصيف مقرر** **Natural Ingredients in Cosmetics**
رئيس القسم **أ د. ارهان إبراهيم أبو هاشم**	**منسق المقرر** **د. جرمين نظير سلامة جرجس**

General

University	Mansoura
Faculty	Pharmacy
Department offering the course	Pharmaceutics
Department supervising the course	Pharmaceutics
Program on which the course is given	Diploma of Cosmetic Products Courses
Academic Level	Postgraduate
Academic year	2022/2021 - second semester
Date of course specification approval	15/5/2022

A.Basic Information: Course data:

Course Title	**Natural Ingredients in Cosmetics**
Course Code	**PTD-B102**
Prerequisite	------
Teaching Hours: Lecture	2 عدد الساعات الزمنية
: Practical	1 عدد الساعات الزمنية
Total Credit Hours	3

B. Professional Information

1- Overall Aims of Course:

After completion this course, the student will be able to:

1. Gain information about herbal principles of some natural cosmetic products.
2. Understand the natural materials used in preparation of cosmetics as oils, flavoring agents, and natural coloring agents.
3. Obtain highly qualified pharmacist who will have a high and good experience, knowledge and skills to use natural components in cosmetic products.

2- Intended Learning Outcomes (ILOs)

2.1. *Knowledge and Understanding*

After completion of the course, graduates will be able to

A2	a1	Define the bioactivity of natural ingredients in cosmetics.
	a2	Name the different natural materials used in cosmetic preparations.
	a3	Understand the basic concepts and classification of natural ingredients in cosmetic

		products.
	a4	State different phytomedicines in cosmetic products.

2.2. Intellectual Skills

After completion of the course, graduates will be able to

B1	b1	Select the suitable and different origins of natural products.
	b2	Describe the basic concepts involved in the selection of suitable natural components.
	b3	Evaluate factors affecting on the preparation and evaluation of different cosmetic preparations.
	b4	Recognize classification of natural compounds used in preparation of cosmetic products.

2.3. Professional and Practical Skills

After completion of the course, graduates will be able to

C1	c1	Classify the different natural cosmetic products.
	c2	Design new formulations of natural components of cosmetic products.
	c3	Formulate different cosmetic preparations using natural components.
	c4	Perform the evaluation of some cosmetic products of natural components.

2.4. General and Transferable Skills

After completion of the course, graduates will be able to

D1	d1	Use modern technology in retrieving information
D2	d2	Communicate effectively in a scientific language
D3	d3	Implement writing and presentation skills
D5	d4	Identify and solve problems
D6	d5	Practice independent learning
D7	d6	Demonstrate time management ability

3. Course Contents

No.	Topic	No. of hours
1	Introduction	2
2	Natural materials used in preparation of cosmetics: Fixed oils, volatile oils,	2

	lipid, and fats	
3	Natural materials used in preparation of cosmetics: Terpenoids, phenols and related compounds	2
4	Natural materials used in preparation of cosmetics: Alkaloids and glycosides	2
5	Natural materials used in preparation of cosmetics: Carbohydrates and flavonoids	2
6	Natural materials used in preparation of cosmetics: Almond, Coconut Palm and Soya Bean	2
7	Herbal cosmetic formulation	2
8	Coloring agents in in preparation of cosmetics	2
9	Flavoring agents in in preparation of cosmetics	2
10	Safety of essential oils used for cosmetics	2
11	Herbal principles of green tea, olive oil, rosemary, and aloe Vera	2
Practical topics		
1	Liquefying cleansing cream	1
2	Lotion (Anti-acne)	1
3	Cosmetic Serums: Vitamin-Blend Whitening Serum	1
4	Perfumes and Toiletries: Floral Body Mist	1
5	Lip stick and rouge cream blusher	1
6	Body scrub	1
7	Sunscreen cream	1
8	Shampoo	1
٩	Mascara	1
١٠	Revision	1

4. Matrix of knowledge and skills of the course (contents versus ILOs of the course)

Week	Topics	Course ILOs			
		K.U*	IS**	P.P.S***	G.T.S****
1	Introduction	a1,a2	b4	c4	d1,d2
2	Natural materials used in preparation of cosmetics: fixed oils, volatile oils, lipid, and fats	a2, a4, a1	b1, b2	c1	d1
3	Herbal cosmetic formulation	a1, a3, a8	b3, b5	c2, c5	d4
4	Natural materials used in preparation of cosmetics: Terpenoids, phenols and related	a2, a4	b2	c3	d1, d2

	compounds				
5	Coloring agents in in preparation of cosmetics	a3, a5	b1, b3	c1	d1
6	Natural materials used in preparation of cosmetics: Alkaloids and glycosides	a2, a4	b2	c1, c3	d3
7	Flavoring agents in in preparation of cosmetics	a3, a6	b3	c2, c3	d1
8	Natural materials used in preparation of cosmetics: Carbohydrates and flavonoids	a2, a4	b2	c2	d2
9	Safety of essential oils used for cosmetics	a5, a7	b4	c4	d3
10	Natural materials used in preparation of cosmetics: Almond, Coconut Palm and Soya Bean	a2, a4	b2	c1	d1, d2
11	Herbal principles as green tea, olive oil, rosemary, and aloe Vera	a3, a6, a8	b1, b3, b5	c3, c5	d4

5- Teaching and Learning Methods:

5.1	**Lectures using Power Point** (PPT) presentations
5.2	**Lectures using whiteboard**
5.3	**Video-recorded lectures**, uploaded to the University Portal for Online learning
5.4	**Interactive Sessions** using Microsoft Teams

6- Student Assessment:

	Assessment Methods		**Assessment Schedule**	**Weighing of Assessments**
Assessment 1	**Written Exam (Final)**	Paper exams that are corrected electronically and/or manually. To assess understanding, intellectual, professional skills	Week 13-15	70%
Assessment 2	**Tutorial / or Practical**	To assess professional skills	Week 12	20%
Assessment 3	**Oral Exam**	To assess understanding, intellectual skills, General and Transferable skills	Week 13-15	10%
				100 %

7- List of References

	Reference	Type
1.	• Harrys Cosmeticology, Martin M. Rieger (Editor). Publisher: chemical publisher, chemical publishing company ,8th edition May 2000 • Handbook of cosmetic science and technology, the theory and practice of cosmeceuticals by patel Hardik k. Suthar Rajnikant M. Patel Meghana H, Paperback ,2015	Essential Book **(Textbooks)**
2.	• Handbook of cosmetic science and technology, the theory and practice of cosmeceuticals by patel Hardik k. Suthar Rajnikant M. Patel Meghana H, Paperback ,2015 • The chemistry and manufacture of cosmetics M, Schlossman (editor) Allureds publishing crop USA vols 1 2001 • Cosmetics and personal care R Scheller and P. Romamouski (editor) Allureds publishing crop USA 1999 • Cosmetics science and technology M.S. Balsam and Edward Sagarin (editors) krieger publishing company Malabar, Florida, USA 2nd Ed, vols 1-3, 1992.	Recommended books
3.	• www.science direct.com • www.pubmed.com • www.ekb.eg	websites

8- Facilities required for teaching and learning

-Class room	Data show- Computers, Internet.
- Library	Recommended books
Others	Internet resources

9. Signature

Course Coordinator	Head of Department	Date
Dr. Germeen Nazeer	**Prof. Dr. Irhan Ibrahim Abu Hashim**	15/5/2022

* Date of Dept. Council Approval

Department of Pharmaceutics

Program: Cosmetic Products Diploma (PTD-B100) (*Pharmaceutics*)

Course: Skin Histology and Medical Applications
Code: PTD-B103

Academic year: ***2021/2022***
First Semester

توصيف مقرر
علم أنسجة الجلد وتطبيقاته الطبية

البرنامج
دبلوم مستحضرات التجميل

منسق المقرر
د. ريهام مختار أحمد أمان

رئيس القسم
أ.د/ ارهان ابراهيم ابو هاشم

General

University	Mansoura
Faculty	Pharmacy
Department offering the course	Pharmaceutics
Department supervising the course	----
Program on which the course is given	Cosmetic Products Diploma
Academic Level	Postgraduate
Academic year	2021/2022 - First Semester
Date of course specification approval	15/5/2022

A. Basic Information:

Course data:

Course Title		Skin Histology and Medical Applications
Course Code		PTD-B103
Prerequisite		------
Teaching Hours:	Lecture	2
	Practical:	1
Total Credit Hours		3

B. Professional Information

1-Overall Aims of Course:

1- Gain information about principles of bioavailability improvement of cosmetic products.
2- Understand the different components of skin anatomy, physiology and biochemistry.
3- Obtain highly qualified pharmacist who will have a high and good experience, knowledge and skills to use cosmetic products efficiently in the care and cure of different skin and hair conditions.

2- *Intended Learning Outcomes (ILOs)*

2.1. Knowledge and Understanding

After completion of the course, graduates will be able to:

A4	**a1**	Define different methods for bioavailability improvement of cosmetic products.

A6	**a2**	Understand the anatomy, physiology and biochemistry of the skin.
	a3	Identify the different types of skin.
	a4	Classify the different types of skin care applications.
	a5	Classify the different types of skin cure applications in several skin diseases.
	a6	List the different types of hair care applications.
	a7	List the different types of hair cure applications in several hair conditions.

2.2. Intellectual Skills

After completion of the course, graduates will be able to:

B1	**b1**	Assess the suitable and different methods for bioavailability improvement of cosmetic products.
B3	**b2**	Determine the components of skin affecting the efficient delivery of cosmetic products.
	b3	Specify and compare different types of skin and hair cure applications in different diseases.
	b4	Differentiate and classify different types of skin and hair care applications in different conditions.

2.3. Professional and Practical Skills

After completion of the course, graduates will be able to:

C1	**c1**	Utilize the principles of drug design to formulate new skin and hair cure cosmetic products
	c2	Design new formulations for skin and hair care cosmetic products.

2.4. General and Transferable Skills

After completion of the course, graduates will be able to:

D3	**d1**	Use information technology tools to retrieve basic information regarding skin and hair cosmetic products.
D7	**d2**	Utilize online database to gain information in the field of advanced trends in the formulation of skin and hair cosmetic products.

3. Course Contents

Week No.	Lecture Topics	Hours	Practical / Tutorial hr.
1	Methods of the bioavailability improvement of the cosmetic product	2	--
2	Anatomy, Physiology and biochemistry of skin	2	--
3	Skin care	6	4
4			
5			
6	Skin cure	6	6
7			
8			
9	Hair care and cure	4	4
10			
Total 10 weeks		**20**	**14**

Week No.	Practical / Tutorial Topics	Hours
1	Cleanser	2
2	Toners	2
3	Chemical Exfoliant	2
4	Physical Exfoliant	2
5	Sun blocking new products	2
6	3rd generation moisturizers	2
7	Derma-roller	2
Total 7 weeks		**14**

4. Matrix of knowledge and skills of the course: (Contents versus ILOs of the course)

Week	Topics	Course ILOs			
		K.U*	IS**	P.P.S***	G.T.S****
1	Methods of the bioavailability improvement of the cosmetic products	a1	b1	c1	d1, d2
2	Anatomy, Physiology and biochemistry of skin	a2	b2	c2	d1, d2
3	Skin Care	a3, a4	b3	c3	d1, d2
4					
5					
6	Skin Cure	a5	b4	c4	d1, d2
7					
8					
9	Hair Care and cure	a6, a7	b3, b4	c3, c4	d1, d2
10					

** Knowledge and Understanding* ***Intellectual Skills*

****Professional and Practical Skills* *****General and Transferable Skills*

5. Teaching and learning methods:

1- **Lectures using Power Point** (PPT) presentations.
2- Activities and **tasks required to develop students' self-learning skills**.
3- **Class Activity** and **Group Discussion** to explain what has not been understood.
4- Internet search and Research Assignments to design **Formative Assignments**.
5- **Practical Training / Laboratory**.

6. Student Assessment:

No.	Assessment Methods		Assessment Schedule	Weighing of Assessments
1	**Written exam**	Paper exams that are corrected electronically and/or manually. To assess understanding, intellectual, professional skills	At the end of the year	70%
2	**Oral exam**	To assess understanding, intellectual skills, General and Transferable skills.		10 %
3	**Tutorial / or Practical assignments and Semester work**	– Assignments prepared by students and sent to the supervisor electronically for evaluation. – To assess professional skills		20%
				Total = 100%

7. List of References:

	Reference	Type
1	Harrys cosmeticology, Martin M. Rieger (Editor). Publisher: chemical publisher, chemical publishing company ,8th edition May 2000 ISBN-13: 978-0198749691. ISBN-10: 9780198749691	Textbook
2	Handbook of cosmetic science and technology, the theory and practice of cosmeceuticals by Patel Hardik k. Suthar Rajnikant M. Patel Meghana H, Paperback, 2015	Textbook
3	The chemistry and manufacture of cosmetics M, Schlossman (editor) Allureds publishing crop USA vols 1 2001	Textbook
4	www.sciencedirect.com and www.pubmed.com	Websites

8. Facilities required for teaching and learning:

Class room	**Data show:- Computers, Internet**. ……..
Laboratory facilities	**Tutorial**

Signature:

Course Coordinator	Head of Department	Date*
Dr. Reham Mokhtar Aman	Prof. Dr. Irhan Ibrahim Abu Hashim	15/5/2022

* Date of Dept. Council Approval

Department of Pharmaceutics

قسم الصيدلانيات
Department of Pharmaceutics

Program: Cosmetic Products Diploma (PTD-B100)

(*Pharmaceutics*)

Course Specification

Academic year: 2021/2022

البرنامج دبلوم مستحضرات التجميل	توصيف مقرر **Stability and storage of cosmetics.**
رئيس القسم **أ د. إرهان إبراهيم أبو هاشم**	منسق المقرر **د. ماريزا فؤاد فرج**

General

University	Mansoura
Faculty	Pharmacy
Department offering the course	Pharmaceutics
Department supervising the course	Pharmaceutics
Program on which the course is given	Diploma of cosmetic products
Academic Level	Postgraduate
Academic year	2021/2022 - First semester
Date of course specification approval	15/5/2022

A: Basic Information : Course data

Course Title	Stability and storage of cosmetics.
Course Code	PTD-B100
Prerequisite	------
Teaching Hours: Lecture	2
Practical:	2
Total Credit Hours	4(hours/week)

B. Professional Information

1- Overall Aims of Course:

After completion this course, the student will be able to:
1. Gain information about stability calculations.
2. Recognize the details of stability, Reaction kinetics, forms of instability of different cosmetic products.
3. Gain information about evaluation tests of different cosmetic products.
4. Obtain highly qualified pharmacist who will have a high and good experience, knowledge and skills to work in all field of pharmacy practice regarding optimum storage conditions of different cosmetic products.

2- Intended Learning Outcomes (ILOs)

2.1. *Knowledge and Understanding*

After completion of the course, graduates will be able to

A3	a1	Identify the different forms of instability and optimum storage conditions of different cosmetic products.
A2	a2	Appreciate stability types, factors affecting stability, packaging and storage of

		cosmetics.
A7	a3	Interpretation of kinetic data
A7	a4	Estimation of half-life and shelf life of the tested formulations (stability kinetics study).
A1	a5	Understand orders of reaction kinetics and cosmetics stability.

2.2. Intellectual Skills

After completion of the course, graduates will be able to

B4	b1	Select the suitable method for cosmetics stability assessment
B3& B7	b2	Illustrate the different types of degradation reactions and instabilities of different cosmetics.
B4	b3	Understand quality principles, quality parameters and Good Manufacturing Practice Elements (GMP).
B8	b4	Apply pharmaceutical calculations to estimate the half-life and shelf life of cosmetic products.
B7	b5	Determine the kinetic order describing the degradation reaction.

2.3. Professional and Practical Skills

After completion of the course, graduates will be able to

C6	c1	Adapt the stability parameters.
C3	c2	Assess certain cosmetic products forms from Egyptian market.
C4	c3	Knowing the possible evaluation tests to evaluate the stability of different cosmetics.
C4	c4	Recognizing the suitable storage conditions for each cosmetic product.

2.4. General and Transferable Skills

After completion of the course, graduates will be able to

D3	d1	Use information technology tools to retrieve information regarding technology of preparation, stability and storage cosmetic products.
D5	d2	Practice independent self-learning skills.
D4	d3	Develop written and oral communication skills.
D1	d4	Direct and work effectively in a team.

3. Course Contents

Week No.	Topics	Lecture Hours	Practical / Tutorial hr.
1	Stability prediction by the pharmacist	2	2
2	Stability calculation	2	2
3	Interpretation of kinetic data	2	2
4	Different forms of degradation of cosmetics (instability).	2	2
5	Strategy and tactics of stability testing	2	2
6	Accelerated stability tests.	2	2
7	Optimum storage conditions of cosmetics	2	2
8	Stability tests of Nail Lacquers and sunscreens	2	2
9	Stability tests of creams	2	2
10	Stability tests of powders and toothpastes	2	2
Total: 10 weeks		**20**	**20**

4- Matrix of knowledge and skills of the course (contents versus ILOs of the course)

Topic	Course ILOs			
	K.U*	IS**	P.P.S***	G.T.S****
Stability prediction by the pharmacist	a2	b1	c2	d1
Stability calculation	a2	b1	c2	d1
Interpretation of kinetic data	a1, a4	b2,b4,b5	c1, c4	d4
Different forms of degradation of cosmetics (instability).	a1	b2, b3	c1	d2,d3
Strategy and tactics of stability testing	a1, a5	b1,b2	c1, c4	d1
Accelerated stability tests.	a5	b2	c1	d1,d4
Optimum storage conditions of cosmetics	a1	b2	c1,c 4	d1
Practical course will be	a3	b1	c3	d2

application on the theoretical studies related to the evaluation tests of cosmetics.				

** Knowledge and Understanding* ***Intellectual Skills* ****Professional and Practical Skills* *****General and Transferable Skills*

5- Teaching and Learning Methods:

5.1	**Lectures using Power Point** (PPT) presentations
5.2	**Lectures using whiteboard**
5.3	**Video-recorded lectures**, uploaded to the University Portal for Online learning

6- Student Assessment:

	Assessment Methods		**Assessment Schedule**	**Weighing of Assessments**
Assessment 1	**Written Exam (Final)**	Paper exams that are corrected electronically and/or manually. To assess understanding, intellectual, professional skills	At the end of year	70%
Assessment 2	**Tutorial / or Practical** assignments **and Semester work**	Assignments prepared by students and sent to the supervisor electronically for evaluation. To assess professional skills	On 10th week	20%
Assessment 3	**Oral Exam**	To assess understanding, intellectual skills, General and Transferable skills	At the end of year	10%
				100 %

7- List of References

	Reference	**Type**
1.	1- British Pharmacopoeia, Vol., I, 1st Ed., The Stationery Office, London, U. K., (2010). 2- Martindale, The Complete Drug Reference, 35th Ed., Sweetman, S. C., ed., The Pharmaceutical Press, London, U. K., (2007).	Essential Book **(Text Books)**

2.	1- "Ansel's Pharmaceutical Dosage Forms and Drug Delivery Systems" 8th Ed., Wolters Kluwer, Lippincott Williams and Wilkins, Philadelphia, (2005). 2- The science of dosage form design " The English language book society and Churchill Livingstone (2002). 3- "Remington's: The science and practice of pharmacy" 21st Ed., Gennaro, A. R., ed., Mack publishing C., Lippincott Williams and Wilkins, Philadelphia, (2006). 4- QUALITY, Pharmaceutical Engineering Series, Kate McCormick, Butterworth-Heinemann, London, (2002).	Recommended books
3.	http://www.sciencedirect.com http://www.google.com http://www.pubmed.com	websites

8- Facilities required for teaching and learning

Class room	**Data show- Computers, Internet.**
Others	**Audio facility**

9. Signature

Course Coordinator	Head of Department	Date
Dr. Mariza Fouad Farag	Prof .dr Irhan Abu Hashim	15/5/2022

* Date of Dept. Council Approval

Department of Pharmaceutics

Program: Cosmetic Products Diploma (PTD-B100)

(*Pharmaceutics*)

Course Specification

Academic year: 2021/2022

البرنامج **دبلوم مستحضرات التجميل**	**توصيف مقرر** **Technology of cosmetic products**
رئيس القسم **أ د. ارهان ابراهيم أبو هاشم**	**منسق المقرر** **د. ماريزا فؤاد فرج**

General

University	Mansoura
Faculty	Pharmacy
Department offering the course	Pharmaceutics
Department supervising the course	Pharmaceutics
Program on which the course is given	Diploma of cosmetic products
Academic Level	Postgraduate
Academic year	2021/2022 - First semester
Date of course specification approval	15/5/2022

A.Basic Information : Course data :

Course Title	Technology of cosmetic products
Course Code	PTD-B101
Prerequisite	------
Teaching Hours: Lecture	2 عدد الساعات الزمنية
Practical:	1 عدد الساعات الزمنية
Total Credit Hours	3

B. Professional Information

1- Overall Aims of Course:

After completion this course, the student will be able to:

1. Know the basic principles and techniques of compounding, dispensing and evaluation of different cosmetic preparations.
2. Enumerate the different properties and classification of cosmetic preparations.

2- Intended Learning Outcomes (ILOs)

2.1. *Knowledge and Understanding*

After completion of the course, graduates will be able to

A1	a1	Define the different cosmetic products using different raw materials.
A2	a2	Name the different additives used in cosmetic preparations.
A3	a3	State the different preparation methods of cosmetic products.
A9	a4	Identify the different methods of evaluation of some cosmetic preparations.
A10	a5	Illustrate the pharmaceutical use of different cosmetic products.

2.2. Intellectual Skills

After completion of the course, graduates will be able to

B1	b1	Describe the basic concepts involved in the formulation and manufacture of cosmetic products.
B4	b2	Evaluate factors affecting on the preparation and evaluation of different cosmetic preparations.

2.3. Professional and Practical Skills

After completion of the course, graduates will be able to

C1	c1	Classify the different cosmetic products.
C2	c2	Estimate the different methods for preparation of different cosmetic products.
C4	c3	Evaluate some cosmetic products.

2.4. General and Transferable Skills

After completion of the course, graduates will be able to

D1	d1	Communicate clearly by verbal and written means.
D2	d2	Demonstrate creativity and time management abilities.
D5	d3	Practice independent learning needed for continuous professional development.

3. Course Contents

Week No.	Topics	Lecture Hours
1	Raw materials used in cosmetic productions.	2
2	Skin preparations: antiperspirant and deodorant.	2
3	Skin preparations: skin creams.	2
4	Shaving preparations.	2
5	Foot preparations.	2
6	Insect repellents.	2
7	Sun screen	2
8	Skin lighter and bleaches.	2
9	Face pack and masks.	2

10	Colored makeup preparations.	2
11	Bath preparations, skin products for babies.	2
Total: 11 weeks		**22**

4- Matrix of knowledge and skills of the course (contents versus ILOs of the course)

Topic	Course ILOs			
	K.U*	**IS****	**P.P.S*****	**G.T.S******
Raw materials used in cosmetic productions.	a1	b1, b2	c1	d1, d3
Skin preparations: antiperspirant and deodorant.	a2, a4, a5	b1, b2	c2, c3	d2
Skin preparations: skin creams.	a1, a3, a4	b1, b2	c2, c3	d2
Shaving preparations.	a3, a4, a5	b1, b2	c2, c3	d2
Foot preparations.	a3, a4, a5	b1, b2	c2, c3	d2
Insect repellents.	a3, a4, a5	b1, b2	c2, c3	d2
Sun screen	a3, a4, a5	b1, b2	c2, c3	d2
Skin lighter and bleaches.	a3, a4, a5	b1, b2	c2, c3	d2
Face pack and masks.	a3, a4, a5	b1, b2	c2, c3	d2
Colored makeup preparations.	a3, a4, a5	b1, b2	c2, c3	d2
Bath preparations, skin products for babies.	a3, a4, a5	b1, b2	c2, c3	d2

** Knowledge and Understanding* ***Intellectual Skills* ****Professional and Practical Skills*
*****General and Transferable Skills*

5- Teaching and Learning Methods:

5.1	**Lectures using Power Point** (PPT) presentations
5.2	**Lectures using whiteboard**
5.3	**Video-recorded lectures**, uploaded to the University Portal for Online learning
5.4	**Interactive Sessions** using Microsoft Teams

6- Student Assessment:

	Assessment Methods		**Assessment Schedule**	**Weighing of Assessments**
Assessment 1	**Written Exam (Final)**	Paper exams that are corrected electronically and/or manually. To assess understanding,	At the end of year	70%

		intellectual, professional skills		
Assessment 2	**Tutorial / or Practical** assignments **and Semester work**	Assignments prepared by students and sent to the supervisor electronically for evaluation. To assess professional skills	On 10th week	20%
Assessment 3	**Oral Exam**	To assess understanding, intellectual skills, General and Transferable skills	At the end of year	10%
				100 %

7- List of References

	Reference	Type
1.	1- British Pharmacopoeia, Vol., I, 1st Ed., The Stationery Office, London, U. K., (2010).	Essential Book **(Text Books)**
2.	1- "Ansel's Pharmaceutical Dosage Forms and Drug Delivery Systems" 8th Ed., Wolters Kluwer, Lippincott Williams and Wilkins, Philadelphia, (2005).	Recommended books
3.	http://www.sciencedirect.com, http://www.google.com, http://www.pubmed.com	websites

8- Facilities required for teaching and learning

Class room	**Data show- Computers, Internet.**
Others	**Audio facility**

9. Signature

Course Coordinator	Head of Department	Date
Dr. Mariza Fouad Farag	Prof. Dr Irhan Ibrahim Abu Hashim	15/5/2022

* Date of Dept. Council Approval

Department of Pharmaceutics

قسم الصيدلانيات
Department of Pharmaceutics

Program: Cosmetic Products Diploma (PTD-B100)
(*Pharmaceutics*)

Course: Advanced Drug Delivery Systems
Code: PTD-B105

Academic year: ***2021/2022***
Second Semester

توصيف مقرر
أنظمة متقدمة لتوصيل الدواء

البرنامج
دبلوم مستحضرات التجميل

منسق المقرر
د. نهي محمد صالح مرعي

رئيس القسم
أ.د/ إرهان إبراهيم أبو هاشم

General

University	Mansoura
Faculty	Pharmacy
Department offering the course	Pharmaceutics
Department supervising the course	Pharmaceutics
Program on which the course is given	Cosmetic Products Diploma
Academic Level	Postgraduate
Academic year	2021/2022 - Second Semester
Date of course specification approval	15/5/2022

A. Basic Information:

Course data:

Course Title		Advanced Drug Delivery Systems
Course Code		PTD-B105
Prerequisite		------
Teaching Hours:	Lecture	2
	Practical:	1
Total Credit Hours		3

B. Professional Information

1- Overall Aims of Course:

1- Provide the student with comprehensive knowledge & basics of advanced drug delivery systems.
2- Illustrate the characteristics of potential sites for drug delivery and to recognize the strategies required to deliver and/or target drugs successfully to these sites.
3- Provide the student with comprehensive theoretical basic information of modern techniques used for the release of the drug.
4- Cover the modern systems used to deliver drugs from selected pharmaceutical dosage forms.
5- Explain the characteristics of various advanced drug delivery systems (including vesicular carriers such as niosomes, transfersomes, ethosomes, dendrimes) used in practice and under development, be able to recognize their advantages and limitations.
6- Formulate the targeted action dosage forms.
7- Evaluate and study the stability of advanced and targeted dosage forms.

2- *Intended Learning Outcomes (ILOs)*

2.1. Knowledge and Understanding

After completion of the course, graduates will be able to:

A5	**a1**	Illustrate concepts of drug delivery via various routes with fundamentals delivery system formulation and evaluation..
	a2	Distinguish of different theories and techniques to prepare sustained release dosage forms.
	a3	Classify different techniques and their relevant basic principles, advantages and disadvantages of each techniques.
A6	**a4**	Explain the basis for the development of strategies to deliver therapeutic agents to specific target sites at rates appropriate for the optimization of therapeutics effect.
	a5	Describe the therapeutic opportunities afforded by biotechnology products, to understand the barriers to the efficient delivery and targeting of these entities and to understand the potential strategies available for the design of drug delivery systems.

2.2. Intellectual Skills

After completion of the course, graduates will be able to:

B3	**b1**	Interpret available information in regarding drug properties & its delivery problems.
	b2	Evaluate the possible approaches to overcome formulation drug delivery problems.
B2	**b3**	Classify the modern systems in development of new trends to deliver drug molecules to specific target sites.
	b4	Conclude the handling techniques in the preparation of new delivery system.
	b5	Evaluate the quality of different newly prepared dosage forms.
B10	**b6**	Assess the validity of quantitative data, to undertake appropriate mathematical analysis competently and to be able to develop a rationale to explain such results by written and oral means.

2.3. Professional and Practical Skills

After completion of the course, graduates will be able to:

C2	**c1**	Use different techniques needed for development, formulation, and evaluation of delivery system.
	c2	Conduct the pharmaceutical principles which govern the selection of delivery route, therapeutic agent, and dosage form in the optimization of pharmacotherapy; to appreciate novel strategies for the design and targeting of

		therapeutic agents
	c3	Design new formulation suitable for each disease and apply the drug dosage forms controlled and/or sustained release according to needs.
	c4	Manage their ability to collect, manipulate, interpret and discuss experimental data of relevance to these areas.

2.4. General and Transferable Skills

After completion of the course, graduates will be able to:

D6	**d1**	Use information technology in the field of delivery system design & evaluation.
	d2	Communicate effectively in a scientific language to identify and solve problems.
D1	**d3**	Demonstrate time management ability and the effective work in a team and independently.
D4	**d4**	Present data clearly in both oral and written ways.

3. Course Contents

Week No.	Lecture Topics	Hours
1	Fundamental of drug delivery systems (Influence of drug properties, Design of sustained and controlled release)	2
2	Site-directed Drug Delivery & Targeting.	2
3	Vesicular drug delivery systems (liposomes and niosomes).	4
4		
5	Polymeric nanoparticles (preparation, characterization, advantages, and applications).	2
6	Vesicular drug delivery systems (transfersomes and ethosomes).	2
7	Solid lipid nanoparticles (preparation, characterization, advantages, and applications).	2
8	Dendrimers as drug and gene delivery system (preparation, characterization, advantages, and applications).	2
9	Micelles (preparation, characterization, advantages, and applications).	2
10	Nanocrystals (preparation, characterization, advantages, and applications).	2

Total 10 weeks		**20**

Week No.	Practical / Tutorial Topics	Hours
1	Introduction	2
2	Liposomes	2
3	Niosomes	2
4	polymeric nanoparticles	2
5	Transferosome and Ethosomes	2
6	Solid lipid nanoparticles	2
7	Dendrimers	2
8	Micelles	2
9	Nanocrystals	2
Total 9 weeks		**18**

4. Matrix of knowledge and skills of the course: (Contents versus ILOs of the course)

Week	Topics	Course ILOs			
		K.U*	IS**	P.P.S***	G.T.S****
1	Fundamental of drug delivery systems (Influence of drug properties, Design of sustained and controlled release)	a1, a2, a3, a4, a5	b1, b2, b3, b5, b6	c1, c2, c3, c4	d1, d2, d4
2	Site-directed Drug Delivery & Targeting.	a1, a2, a3, a4, a5	b1, b4, b6	c1, c2, c3, c4	d1, d3
3	Vesicular drug delivery systems (liposomes and niosomes).	a1, a2, a3, a4	b1, b2, b3, b5, b6	c1, c2, c3, c4	d1, d2, d4
4					
5	Polymeric nanoparticles (preparation, characterization, advantages, and applications).	a1, a2, a3, a4	b1, b2, b3, b5, b6	c1, c2, c3, c4	d1, d2, d4
6	Vesicular drug delivery systems (transfersomes and ethosomes).	a1, a2, a3, a4	b1, b4, b6	c1, c2, c3, c4	d1,d3
7	Solid lipid nanoparticles (preparation, characterization, advantages, and applications).	a1, a2, a3, a4	b1, b2, b3, b5, b6	c1, c2, c3, c4	d1, d2, d4
8	Dendrimers as drug and gene delivery system (preparation, characterization, advantages, and applications).	a1, a2, a3, a4	b1, b2, b3, b5, b6	c1, c2, c3, c4	d1, d2, d4
9	Micelles (preparation, characterization, advantages, and applications).	a1, a2, a3, a4	b1, b4, b6	c1, c2, c3, c4	d1, d3
10	Nanocrystals (preparation, characterization, advantages, and applications).	a1, a2, a3, a4	b1, b2, b3, b5, b6	c1, c2, c3, c4	d1, d2, d4

* *Knowledge and Understanding* **Intellectual Skills*

***Professional and Practical Skills* ****General and Transferable Skills*

5. Teaching and learning methods:

1- **Lectures using Power Point** (PPT) presentations.

2- **Video-recorded lectures**, uploaded to the University Portal for Online learning.
3- Activities and **tasks required to develop students' self-learning skills**.
4- **Tutorial**, **Class Activity** and **Group Discussion** to explain what has not been understood.
5- **Interactive Sessions** using Microsoft Teams.
6- Internet search and Research Assignments to design **Formative Assignments**.
7- **Seminars**.

6. Student Assessment:

No.	Assessment Methods		Assessment Schedule	Weighing of Assessments
1	**Seminars**	to assess knowledge, general and transferable skills.	From 2nd week to 9th week	0
2	**Practical exam**	to assess professional and practical skills.	10th week	20%
3	**Oral exam**	to assess general and transferable skills.	At the end of the year	10 %
4	**Written exam**	to assess all skills.		70 %
				Total = 100%

7. List of References:

	Reference	Type
1	"Remington's: The science and practice of pharmacy" 21st Ed., Gennaro, A. R., ed., Mack publishing C., Lippincott Williams and Wilkins, Philadelphia, (2006).	Lecture Note
2	"Ansel's Pharmaceutical Dosage Forms and Drug Delivery Systems" 8th Ed., Wolters Kluwer, Lippincott Williams and Wilkins, Philadelphia, (2005).	Textbook
3	Aulton M., E., Pharmaceutics: The Science of Dosage Form Design, 5th ed., Churchill Livingstone, Edinburgh, 2017.	Textbook
4	http://www.elsevier.com http://www.sciencedirect.com http://www.ekb.com	Websites

8. Facilities required for teaching and learning:

Class room	**Data show:- Computers, Internet..**

9. Signature:

Course Coordinator	Head of Department	Date*
Dr. Noha Mohamed Saleh	Prof. Dr. Irhan Ibrahim Abu Hashim	15/5/2022

* Date of Dept. Council Approval

Department of Pharmaceutics

Program: Cosmetic Products Diploma (PTD-B100) (*Pharmaceutics*)

Course: Packaging and Packaging Materials.
Code: PTD-B109

Academic year: ***2021/2022***
Second Semester

توصيف مقرر
التغليف والمواد المستخدمة للتغليف

البرنامج
دبلوم مستحضرات التجميل

منسق المقرر
د. مروة صلاح الدين الدهان

رئيس القسم
أ.د/ ارهان ابراهيم ابوهاشم

General

University	Mansoura
Faculty	Pharmacy
Department offering the course	Pharmaceutics
Department supervising the course	----
Program on which the course is given	Cosmetic Products Diploma
Academic Level	Postgraduate
Academic year	2021/2022 - Second Semester
Date of course specification approval	15/5/2022

A. Basic Information:

Course data:

Course Title		Packaging and Packaging Materials
Course Code		PTD-B109
Prerequisite		------
Teaching Hours:	Lecture	2
	Practical:	0
Total Credit Hours		2

B. Professional Information

1-Overall Aims of Course:

1- Obtain highly qualified pharmacist who will have a high and good experience, and skills to know and evaluate different packaging.
2- Understand the different methods used in packaging of different products.
3- Gain information about the different materials used in packaging

2- *Intended Learning Outcomes (ILOs)*

2.1. Knowledge and Understanding

After completion of the course, graduates will be able to:

A2	**a1**	Describe the different materials used in packaging.
	a2	Define the different requirements of packaging and types of containers.

	a3	Identify the different spoilage mechanisms and climatic hazards of distribution.
	a4	Define different problems of packaging containers.

2.2. Intellectual Skills

After completion of the course, graduates will be able to:

B4	**b1**	Select the suitable container for each type of cosmetic products.
B9	**b2**	Specify the different methods for quality control assessments of cosmetics containers.
	b3	Determine the different spoilage mechanisms of packaging.

2.3. Professional and Practical Skills

After completion of the course, graduates will be able to:

C4	**c1**	Utilize the proper material for packaging of the cosmetic products.
C5	**c2**	Design the different types of containers suitable for different products.
	c3	Perform the climatic hazards of distribution

2.4. General and Transferable Skills

After completion of the course, graduates will be able to:

D3 D7	**d1**	Use information technology tools to retrieve information regarding packaging of cosmetic products.

3. Course Contents

Week No.	Lecture Topics	Hours
1	Requirements of a satisfactory package	2
2-3	Different types of containers	4
4 -6	Spoilage mechanisms and Climatic hazards of distribution	6
7-8	Packaging materials and classification of polymers used in packaging	4
9-10	Technology of plastics and potential problems of plastic containers	4
Total 10 weeks		**20**

4. Matrix of knowledge and skills of the course:

(Contents versus ILOs of the course)

Week	Topics	Course ILOs			
		K.U*	IS**	P.P.S***	G.T.S****
1	Requirements of a satisfactory package	a1, a2	b1	c1	d1
2-3	Different types of containers	a2	b1	c1, c2	d1
4-6	Spoilage mechanisms and Climatic hazards of distribution	a3	b3	c3	d1
7-8	Packaging materials and classification of polymers used in packaging	a1	b2	c1	d1
9-10	Technology of plastics and potential problems of plastic containers	a4	b2	c1	d1

** Knowledge and Understanding* ***Intellectual Skills*

****Professional and Practical Skills* *****General and Transferable Skills*

5. Teaching and learning methods:

1- **Lectures using Power Point** (PPT) presentations.
2- **Video-recorded lectures**, uploaded to the University Portal for Online learning.
3- Activities and **tasks required to develop students' self-learning skills**.
4- Internet search and Research Assignments to design **Formative Assignments**.

6. Student Assessment:

No.	Assessment Methods		Assessment Schedule	Weighing of Assessments
Assessment 1	**Written Exam (Final)**	Paper exams that are corrected electronically and/or manually. To assess understanding, intellectual, professional skills	week 14	90%
Assessment 2	**Oral Exam**	To assess understanding, intellectual skills, General and Transferable skills	week 14	10%
				100 %

7. List of References:

	Reference	Type
1	Formulating, Packaging, and Marketing of Natural Cosmetic Products 1st Edition, Nava Dayan and Lambros Kromidas Eds, 2011	Textbook
2	Handbook of cosmetic science and technology, the theory and practice of cosmeceuticals by Patel Hardik k. Suthar Rajnikant M. Patel Meghana H, Paperback, 2015	Textbook
3	www.sciencedirect.com and www.pubmed.com	Websites

8. Facilities required for teaching and learning:

Class room	**Data show:- Computers, Internet. .**

9. Signature:

Course Coordinator	Head of Department	Date*
Dr. Marwa Salah El-Dahhan	Prof. Dr. Irhan Ibrahim Abu Hashim	15/5/2022

* Date of Dept. Council Approval

Department of Pharmaceutics

Program: Cosmetic Products Diploma (PTD-B100)
(*Pharmaceutics*)

Course: Pharmaceutical Evaluation of Cosmetics.
Code: PTD-B107

Academic year: ***2021/2022***
Second Semester

توصيف مقرر
تقييم مستحضرات التجميل

البرنامج
دبلوم مستحضرات التجميل

منسق المقرر
د. ريهام مختار أحمد أمان

رئيس القسم
أ.د/ ارهان ابراهيم ابو هاشم

General

University	Mansoura
Faculty	Pharmacy
Department offering the course	Pharmaceutics
Department supervising the course	----
Program on which the course is given	Cosmetic Products Diploma
Academic Level	Postgraduate
Academic year	2021/2022 – Second Semester
Date of course specification approval	15/5/2022

A. Basic Information:

Course data:

Course Title		Pharmaceutical Evaluation of Cosmetics
Course Code		PTD-B107
Prerequisite		------
Teaching Hours:	Lecture	2
	Practical:	0
Total Credit Hours		2

B. Professional Information

1-Overall Aims of Course:

1- Obtain highly qualified pharmacist who will have a high and good experience, knowledge, and skills to evaluate different cosmetic products.
2- Understand the different animal models for drug photo allergy assessment and their correlation with humans.
3- Gain information about principles of quality control and clinical methods in evaluating cosmetics.

2- *Intended Learning Outcomes (ILOs)*

2.1. Knowledge and Understanding

After completion of the course, graduates will be able to:

A8	**a1**	Describe the different tests to evaluate cosmetic products.
A9	**a2**	Understand the different animal and human models for drug photo allergy assessment.

	a3	Identify the different clinical methods to evaluate cosmetic products.
	a4	Define different methods for quality control assessments of cosmetics.

2.2. Intellectual Skills

After completion of the course, graduates will be able to:

B4	**b1**	Select the suitable and different methods for cosmetic products evaluation.
B5	**b2**	Conduct the different methods for quality control assessments of cosmetics.
	b3	Compare and select the proper animal model for drug photo allergy assessment.
	b4	Specify the suitable clinical method for drug photo allergy assessment.

2.3. Professional and Practical Skills

After completion of the course, graduates will be able to:

C2	**c1**	Apply the selected animal models and clinical methods for drug photo allergy assessment.
C3	**c2**	Utilize the proper method for quality control assessments of cosmetics.
	c3	Perform the evaluation of some cosmetic products.

2.4. General and Transferable Skills

After completion of the course, graduates will be able to:

D1	**d1**	Direct and work effectively in a team.
D3	**d2**	Practice independent self-learning skills.
D4	**d3**	Develop written and oral communication skills.
D5 D7	**d4**	Use information technology tools to retrieve information regarding evaluation of cosmetic products.

3. Course Contents

Week No.	Lecture Topics	Hours
1	Introduction	2
2	Evaluation of different cosmetic products (skin irritation, eye irritation & efficacy)	2

3	– Animal Models for assessment of systemic effect from topically applied substances. – Animal Models for drug photo allergy and their correlation with humans.	2
4	Test for preservation.	2
5	Test for antioxidant.	2
6	Human experimental contact dermatitis.	2
7	Assessment of Topical Photosensitivity in Human.	2
8	Quality control of cosmetics.	2
9	Quality control of cosmetics.	2
10	Clinical methods of cosmetics.	2
Total 10 weeks		**20**

4. Matrix of knowledge and skills of the course: (Contents versus ILOs of the course)

Week	Topics	Course ILOs			
		K.U*	IS**	P.P.S***	G.T.S****
1	Introduction	a1			
2	Evaluation of different cosmetic products (skin irritation, eye irritation & efficacy)	a1	b1	c3	d1, d2, d3, d4
3	– Animal Models for assessment of systemic effect from topically applied substances. – Animal Models for drug photo allergy and their correlation with humans.	a2, a3	b1	c1	d1, d2, d3, d4
4	Test for preservation.	a3	b1	c3	d1, d2, d3, d4

5	Test for antioxidant.	a3	b1	c3	d1, d2, d3, d4
6	Human experimental contact dermatitis.	a2, a3	b3, b4	c3	d1, d2, d3, d4
7	Assessment of Topical Photosensitivity in Human.	a2, a3	b3, b4	c3	d1, d2, d3, d4
8	Quality control of cosmetics.	a4	b2	c2	d1, d2, d3, d4
9	Quality control of cosmetics.	a4	b2	c2	d1, d2, d3, d4
10	Clinical methods of cosmetics.	a3	b4	c1	d1, d2, d3, d4

** Knowledge and Understanding* ***Intellectual Skills*

****Professional and Practical Skills* *****General and Transferable Skills*

5. Teaching and learning methods:

1- **Lectures using Power Point** (PPT) presentations.
2- Activities and **tasks required to develop students' self-learning skills**.
3- **Tutorial**, **Class Activity** and **Group Discussion** to explain what has not been understood.
4- Internet search and Research Assignments to design **Formative Assignments**.
5- **Seminars**.

6. Student Assessment:

No.	Assessment Methods		Assessment Schedule	Weighing of Assessments
Assessment 1	**Written Exam (Final)**	Paper exams that are corrected electronically and/or manually. To assess understanding, intellectual, professional skills		90%
Assessment 2	**Oral Exam**	To assess understanding, intellectual skills, General and Transferable skills		10%
				100 %

7. List of References:

	Reference	Type
1	Handbook of cosmetic science and technology, the theory and practice of cosmeceuticals by Patel Hardik k. Suthar Rajnikant M. Patel Meghana H, Paperback, 2015	Textbook
2	Cosmeceuticals and Active Cosmetics, Third Edition	Textbook
3	Cosmetics and Dermatologic Problems and Solutions, Third Edition	Textbook
4	www.sciencedirect.com and www.pubmed.com	Websites

8. Facilities required for teaching and learning:

Class room	**Data show:- Computers, InterneT**

9. Signature:

Course Coordinator	Head of Department	Date*
Dr. Reham Mokhtar Aman	Prof. Dr. Irhan Ibrahim Abu Hashim	15/5/2022

* Date of Dept. Council Approval