Faculty of Pharmacy

Professional Master of Cosmeceuticals

(Credit-Hour System)

1. Modules Description:

The following tables represent the distribution of modules for the first and second semesters and the research project (Tables 1 & 2), and the distribution of field placements for the third and fourth semesters (Tables 3 & 4).

Table (1): Modules of the First Semester

Examination mark %					Credit hours (L+P/T)	Code	Title of the module
Total marks	U	P/T	CW	Oral			
100	70	---	30	---	2+0	PCT610	Basic Physiology (Integumentary System)
100	70	---	30	---	2+0	PCT611	Dermatological cases: diagnosis and treatment
100	70	--	30	---	2+0	PCT612	Cosmetic Products Additives
100	50	25	10	15	3+2	PCT613	Cosmetic Products Formulations
100	70	---	30	---	2+0	PCT614	Bioactive Ingredients in Cosmetic Products
100	50	25	10	15	3+1	PCT615	Cosmetic Products Technology
					17	**Total credit hours per week**	

CW: Course work; P: practical exam; T: tutorial; U: unseen exam. (L+P/T): Lecture + Practical/Tutorial

Credit hours: 1 credit hour is equivalent to 1 lecture hour or 2 hours practical/tutorial or 3 hours field training per week per semester.

Table (2): Modules of the Second Semester

Examination mark %					Credit hours (L+P/T)	Code	Title of the module
Total marks	**U**	**P/T**	**CW**	**Oral**			
100	50	25	10	15	3+1	PCT616	Advanced Cosmetic Products Formulations
100	50	25	10	15	2+1	PCT617	Cosmetic Products Stability and Quality Control
100	70	---	30	---	2 +0	PCT618	Cosmetic Products Registration and Legislation
100	60	25	15	---	3+2	PCT619	Cosmetic Products Marketing, Branding & Entrepreneurship
100	Mini thesis	Presentation	CW	---	1+2	PCTp620	Research Project
	25	40	35				
					17	**Total credit hours/week**	

CW: Course work; P: practical exam; T: tutorial; U: unseen exam. (L+P/T): Lecture + Practical/Tutorial

Credit hours: 1 credit hour is equivalent to 1 lecture hour or 2 hours practical/tutorial or 3 hours field training per week per semester.

Table (3): Field Placements (Third Semester)

Evaluation marks %				Credit hours	Code	Title of the module
Total	**Performance ***	**Case Report**	**Case presentation**			
100	20	30	50	3	PCT621	Production Industrial Placement
100	20	30	50	3	PCT622	Quality Assurance Industrial Placement
100	20	30	50	2	PCT623	Cosmetic Products Registration Placement
				8	Total credit hours/week	

Credit hours: 1 credit hour is equivalent to 1 lecture hour or 2 hours practical/tutorial or 3 hours field training per week per semester.

Table (4): Field Placements (Fourth Semester)

Evaluation marks %				Credit hours	Code	Title of the module
Total	**Performance***	**Case Report**	**Case presentation**			
100	20	30	50	3	PCT624	Quality Control (QC) Industrial Placement
100	20	30	50	3	PCT625	Research & Development (R&D) Industrial Placement
100	20	30	50	2	PCT626	Sales and Marketing Placement
				8	Total credit hours/week	

Credit hours: 1 credit hour is equivalent to 1 lecture hour or 2 hours practical/tutorial or 3 hours field training per week per semester.

***Assessment of Student Placement Performance (20 marks):**

Excellent (≥ 15 marks)	Very good (≥ 10 marks)	Good (≥ 5 marks)	Poor (≤ 5 marks)
The student is highly skilled, motivated, and demonstrates near-perfect performance with minimal room for improvement.	The students' skills are well-developed, though some improvement is possible.	The student's performance meets expectations, showing capability, a positive attitude, and signs of self-improvement.	The student's competency is significantly low, with minimal or no motivation or effort to improve.

Description of Modules

Description of Modules
Basic Physiology (Integumentary System) PCT610 (2+0 CH) This module provides knowledge and understanding of human physiology and anatomy. The structure & functions of skin, hair, sweat glands, nail and tooth will also be discussed.
Dermatological Cases: diagnosis and treatment PCT611 (2+0 CH) The module dealing with the medical conditions that affect the integumentary (skin, hair, nails, and related muscle and glands) emphasizing their therapy. For instance: Acne, Aphthous Ulcers, Heat Rash, Nail Fungus, Telogen Effluvium, Psoriasis, Cellulite, Ring Worm – Scalp, Dandruff, Hyperhidrosis, Herpes Simplex, Athlete's Foot.
Cosmetic Products Additives PCT612 (2+0 CH) The module will include the different types of cosmetic preparations additives such as polymers, surfactants, coloring agents, flavoring agents, aromatic oils, antioxidants, viscosity enhancing agents that are used to improve the product. The module is also concerned with approaches to improve formulation additives.
Cosmetic Products Formulations PCT613 (3+2 CH) The module covers formulation, testing and proper uses of sun care products, cleansing products, makeup products, antiperspirants, and deodorants. A variety of products involved in skincare formulations are introduced. In addition, formulation of hair care products such as shampoos, conditioners, anti-dandruff products, hair dyes, chemical hair reshaping, depilatories and hair loss products are discussed. Also, miscellaneous cosmetics and personal care products will be covered. The module allows students to develop skills required for the preparations that will challenge them to develop their own formulations, catering for specific consumer needs.
Bioactive Ingredients in Cosmetic Products PCT614 (2+0 CH) This moule provides an in-depth examination of active components utilized in cosmeceutical preparations, focusing on their properties, functions, and criteria for formulation. Students will explore a variety of advanced cosmetic ingredients, including bioactive peptides, which promote skin repair and regeneration; growth factors that stimulate cellular activity and enhance skin rejuvenation; and stem cells, which offer potential for significant skin rejuvenation and anti-aging effects. The module will cover the mechanisms through which these ingredients exert their effects and how they are incorporated into formulations to address specific skin concerns. By the end of the module, students will acquire a detailed understanding of how these actives contribute to the efficacy of cosmetic products and how to select and utilize them effectively in product development.
Cosmetic Products Technology PCT615 (3+1 CH) The module will equip students with the knowledge and understanding of large scale-up for manufacturing, packaging, and labelling, which are applicable to cosmetic formulations. Also, to introduce students to the common processes employed in the cosmetics industry as mixing, emulsification, distillation. This Module familiarizes students with all the specific cosmetic-focused operations that will need to start formulating cosmetics and even setting up their own lab. The module enables students to critically evaluate these technologies and allow students to decide which one be more suitable for the job.
Advanced Cosmetic Products Formulations PCT616 (3+1 CH) In this module, advanced nanotechnology-based cosmetics formulations, microneedles, and advanced cosmetic ingredients such as bioactive peptides, growth factors and stem cells will be covered. In addition, the different types of nanomaterials employed in cosmetics include niosomes, dendrimers, cubosomes, nanoemulsion, liposomes, fullerenes, solid lipid nanoparticles etc. with concern over their design, characterization, and production will be covered in detail.

Cosmetic Products Stability and Quality Control PCT617 (2+1 CH)

The module will introduce students to the key areas of quality control, assurance, including chemical and physical analysis and cosmetic products stability profiles with appropriate skills to analyze and interpret data. Reaction kinetics and bioactive stability which includes reaction orders, complex reaction orders: Parallel and consecutive reactions, cosmetic products instability will be covered. Also, to identify and control microorganisms to avoid contamination of cosmetic products during manufacturing as well as during use will be discussed.

Cosmetic Products Registration and Legislation PCT618 (2+0 CH)

The module will include regulatory requirements for cosmetic product registration, labeling, importing, and exporting and the role of the National Health Regulatory Authority. Intellectual property issues such as patents and trade secrets will be covered.

Cosmetic Products Marketing, Branding & Entrepreneurship PCT619 (3+2 CH)

This course gives the basic concepts of modern marketing. Students will understand these concepts from a cosmetic industry point of view. This course examines the strategic marketing planning process, consumer behavior, branding, pricing, distribution, promotions, and stakeholder partnership. The course also enables students to identify and deal with sources of finance that support new ventures as well as enable students to analyze and identify a commercially viable cosmetic product and produce a business plan to enable the product to be launched.

Research Project PCTp620 (1+2 CH)

This module will assure the student to gain the necessary core skills to effectively design, plan, perform and report scientific research. Students will undertake a research project and demonstrate skills in critical evaluation of literature information, identification of knowledge gaps and development of research questions and objectives in the form of a short dissertation, review article, market survey or development of a new cosmetic formulation.

Training Placements Description
Production Industrial Placement PCT621 (3 CH) Industry placement (sometimes called internship) is a workplace-based learning, where students gain practical skills related to their courses of cosmetics products formulation in the following manufacturing areas: semisolid, liquids, sprays, advanced cosmeceutical preparations, coating, nail polish, lipsticks, shampoo, etc. In addition, putting into practice the skills and knowledge learnt in the classroom, experiencing different company cultures, systems & work practices and gaining valuable work references. Placement Activities will include providing support, reporting, solving current formulation problems and analysis to meet the needs of an innovative high-tech GMP manufacturing business.
Quality Assurance Industrial Placement PCT622 (3 CH) As a Quality Assurance Intern, students will gain experience in a wide range of Quality Assurance activities throughout the placement. Furthermore, students will acquire and utilize skills in data analysis, root cause investigation, customer and consumer engagement and complaint management. Main responsibilities will focus on the post-market requirements and activities of different product classifications such as Pharmaceuticals, Cosmetics & Herbal Supplements. In addition, performing and documenting investigations on defective product, supporting the product improvement process by highlighting potential problems from the analysis of post market data, as well as quality reviews of batch manufacturing records for compliance will be included. Furthermore, students will be exposed to validation process of the production batches.
Cosmetic Products Registration Placement PCT623 (2 CH) Throughout this placement, students will gain skills related to the regulatory requirements for cosmetic product's registration, labeling, importing, and exporting as per the regulations of ministry of health and population.
Quality Control (QC) Industrial Placement PCT624 (3 CH) There are many benefits to an industrial placement at QC Department, the experience that students will gain is valuable. It will give students an insight into chosen industry, while developing them on a professional and personal level. Performing analysis of raw materials, bulk and finished product using techniques such as: Ion Chromatography, Gas Chromatography, Infra-Red, Karl Fischer, Viscometers, Microbiological analysis of finished products and water samples, checking and carrying out calibrations of equipment and carrying out routine checks of equipment, supporting investigations from customer complaints, supporting the production department with investigations and queries, support R&D with stability testing and investigations.
Research & Development (R&D) Industrial Placement PCT625 (3 CH) Gaining broad experience across the field of Research and Development of Breakthrough cosmeceuticals. While working with the Process and Development Teams, linking into operational, commercial, quality and supply chain teams in a working placement learning how the cosmetics industry operates. Also, students will stay up to date on developments in the cosmetic field and continue to demonstrate performance improvement. Furthermore, the students will review and prepare analysis of emerging cosmetic technology, assess the stability of formulations, ensure commercial feasibility, and follow projects from prototype development through execution. Students will Learn to manage projects and prioritize tasks while gaining experience across working on various development projects through data analysis, summary, and recommendations. Students will have deep technical experience in all aspects of cosmetics formulations including synthetic and natural systems.

Sales and Marketing Placement PCT626 (2 CH)

In this placement, students will gain experience in the strategic marketing planning process, consumer behavior, branding, pricing, distribution, promotions, and stakeholder partnership. As well as students will be enabled to analyze and identify the commercially available cosmetic products and produce a business plan to enable the products to be launched.