



**University of  
Sunderland**

Dodou, Kalliopi (2020) Advances in Dermatology and Hair care.  
[Teaching Resource]

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## Module Descriptor

Module Summary Information	
<b>A</b>	<b>Module Title</b> <b>Advances in Dermatology and Hair care</b>
<b>B</b>	<b>Module Code:</b> CSCM04
<b>C</b>	<b>Credits:</b> 30 credits
<b>D</b>	<b>Level:</b> 7
<b>E</b>	<b>Pre-Requisites:</b> None
<b>F</b>	<b>Co-Requisites:</b> None
<b>G</b>	<b>Faculty:</b> Health Sciences and Wellbeing
<b>H</b>	<b>Module Leader:</b> Dr Kalliopi Dodou
<b>I</b>	<b>Other Teaching Staff:</b> tbc
<b>J</b>	<b>HECoS Code:</b>

<b>K</b>	<b>Content Synopsis- Web version</b>
	<p>Develop critical understanding in: the physiology of healthy and diseased skin; modes of skin aging; the interplay between genetic, hormonal and environmental factors; theory of skin testing methods; latest formulation trends eg microbiome, stem cells etc; structure of healthy and damaged hair; ethnic differences in hair structure; modes of hair damage; formulation approaches and trends to manage damaged hair; hair product testing techniques and methods. Gain analytical and evaluative skills in the application of appropriate methods (objective and subjective) to evaluate skin and hair properties for claim substantiation testing and critically assess, analyse and interpret the data produced with respect to cosmetic product's usage.</p>
<b>L</b>	<b>Module Content</b>
	<p>The learning outcomes will be developed through the following evolving module themes:</p> <p><b>Skin physiology; current trends and practices</b></p> <p>You will gain comprehensive knowledge of the basics and nomenclature of Dermatology, the structure and functions of healthy skin, the role of genetics, endocrine system and environment on skin condition, and the pathophysiology of skin disorders. The skin types and aging modes will be explained in relation to ethnic differences and will be extrapolated to the different cosmetic requirements, introducing the concept of "personalized cosmetics" and age-specific skin formulation requirements. Knowledge gained in the co-requisite "<i>Formulation, Manufacture and Material Science skills for Cosmetic, Personal care and Fragrance products</i>" will contribute to the understanding of the formulation requirements.</p> <p>You will gain understanding of skin immunology, toxicological pathways and related skin testing techniques, and the role of skin enzymes. During practical classes you will become competent in the measurement of skin properties, for example skin elasticity, skin hydration and transepidermal water loss (TEWL), and correlate them with the skin's physiological condition before and after application of a cosmetic formulation.</p>

	<p>You will also become competent in the critical evaluation of scientific and commercial literature on current skin trends, such as microbiome, stem cells etc.</p> <p><b>Hair structure; current trends and practices</b></p> <p>You will gain understanding on hair fibre, hair follicle and scalp skin biology, ethnic differences on hair types, the underlying causes of sensitive scalp, dandruff and related conditions, and the different mechanisms and causes of hair damage. You will develop the skills on the design of objective and subjective sensory evaluation tests for hair products, on the types and experimental design of <i>in vitro</i> hair product tests and the evaluation of hair damage.</p> <p>You will gain expertise on the technology of shampoos and conditioners, the technologies for hair treatments such as perming, relaxing, conditioning, and you will be able to make informed decisions on the choice of suitable surfactants. Knowledge gained in the co-requisite “<i>Formulation, Manufacture and Material Science skills for Cosmetic, Personal care and Fragrance products</i>” will contribute to the understanding of the formulation requirements.</p> <p>You will also become competent in the critical evaluation of scientific and commercial literature on current trends, such as sulphate-free shampoos, sustainable raw materials etc</p>
<b>M</b>	<b>Module Learning Outcomes</b>
	By the end of this module successful students will be able to do the following:
<b>1</b>	Display mastery in the physiology of healthy and diseased <u>skin</u> ; modes of skin aging; the interplay between genetic, hormonal and environmental factors; theory of skin testing methods; latest formulation trends eg microbiome, stem cells etc
<b>2</b>	Display mastery in the structure of healthy and damaged <u>hair</u> ; ethnic differences in hair structure; modes of hair damage; formulation approaches and trends to manage damaged hair; hair product testing techniques and methods.
<b>3</b>	Demonstrate expertise in the application of appropriate methods (objective and subjective) to evaluate <u>skin</u> properties for claim substantiation testing and critically assess, analyse and interpret the data produced with respect to cosmetic usage.
<b>4</b>	Demonstrate expertise in the application of appropriate methods (objective and subjective) to evaluate <u>hair</u> properties for claim substantiation testing and critically assess, analyse and interpret the data produced with respect to cosmetic usage.

<b>N</b>	<b>Teaching and Learning Methods</b>																							
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<b>O</b>	<b>Assessment Methods</b>
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#	Title	Exam Length or Word length	Central or Local Exam	%	Summary	Module Mark
1	Lab write up	3000 word		30	Critical report based on the data analysis and critical discussion of skin product testing lab for claim substantiation. Individually submitted. Assesses learning outcomes 1 and 3. Word limit for guidance only.	*
2	Presentation	30 min		30	Group ppt presentation on a hair product case study. Assesses learning outcomes 2 and 4.	*
3	Open book exam	2 hr		40	Open book individual online exam requiring critical understanding and assessing all learning outcomes	
Overall Mark				100		**
Are there Programme Specific regulations that are applicable to this module?						Yes/No
If Yes please give details:						
Are programme Specific regulations applicable on every programme that the module is delivered on						Yes/No
If No please give details:						
<a href="https://my.sunderland.ac.uk/display/AQH/Academic+Regulations">https://my.sunderland.ac.uk/display/AQH/Academic+Regulations</a>						

P	Reading List
	Parish, L. C. (2006) <i>Atlas of women's dermatology: from infancy to maturity</i> . New York: CRC Press LLC
	Draelos Z. (2016) <i>Cosmetic dermatology: products and procedures</i> . Wiley-Blackwell: Chichester [England]
	Friedman PM, Avram MM. (2014) <i>Laser and light source treatments for the skin</i> . Jaypee Brothers Medical Publishers (P) Ltd: New Delhi, India.
	Maibach HI, Baran R. (2010) <i>Textbook of cosmetic dermatology</i> . Informa Healthcare: New York.
	Robbins, C.R. (2012) <i>Chemical and Physical Behaviour of Human Hair</i> , 5th Edition, Springer

<b>Q</b>	<b>Programmes using the module as Core/Option:</b>
<b>i</b>	MSc Cosmetic Science (core)
<b>ii</b>	
<b>iii</b>	

<b>R</b>	<b>Module Delivery</b>
<b>i</b>	<b>On-Campus Yes/No</b>
<b>ii</b>	<b>Off-Campus Yes/No</b>
<b>iii</b>	<b>Distance Learning Yes/No</b>
<b>iv</b>	<b>Apprenticeship Yes/No</b>
<b>v</b>	<b>Available for incoming Study Abroad students Yes/No</b>
<b>vi</b>	<b>Professional Accreditation: Yes/ No</b> <i>(If yes, by whom and what conditions if any are specific to the module?)</i>

### S. Version Control

Module Descriptors are checked annually and updated when changes are made to the Module.

<b>Version No</b>		<b>Date</b>	<b>Details of change</b>	<b>Author</b>
<b>V1</b>	<b>Document created</b>	19/06/2020	New module	Dr Kalliopi Dodou
<b>V2</b>	<b>Document changed</b>			