COURSE OUTLINE

1.GENERAL

SCHOOL	OF HEALTH AND CARE SCIENCES		
ACADEMIC UNIT	DEPARTMENT BIOMEDICAL SCIENCES- AESTHETICS AND COSMETIC SCIENCE		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	80111	**SEMESTER**	8
COURSE TITLE	AESTHETIC AND DERMATO-COSMETIC SCIENCE IN ONCOLOGY PATIENTS		

INDEPENDENT TEACHING ACTIVITIES *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits*	**WEEKLY TEACHING HOURS**	**CREDITS**
Lectures	3	
Laboratory exercises	-	
		5
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).		

COURSE TYPE *general background, special background, specialised general knowledge, skills development*	OCSBC
PREREQUISITE COURSES:	NO
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	LANGUAGE
IS THE COURSE OFFERED TO ERASMUS STUDENTS	YES
COURSE WEBSITE (URL)	https://bisc.uniwa.gr/course/aisthitiki-kai-dermatokosmitologia-stoys-ogkologikoys-astheneis/ https://eclass.uniwa.gr/courses/AISTH166/

2.LEARNING OUTCOMES

Learning outcomes

The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.

Consult Appendix A

- *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area*
- *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*
- *Guidelines for writing Learning Outcomes*

The aim of the course is for students to understand a) the classification of the anticancer drugs that cause skin adverse effects and their mechanism of action with emphasis to the targeted therapy (kinase inhibitors, monoclonal antibodies b) skin adverse effects of radiotherapy c) the drugs and dermato-cosmetics usually used for the treatment of skin adverse effects and d) the basic principles of dermato-oncology

The goal of the course is for the students to acquire the necessary knowledge for the efficient support of the pharmaceutical and dermato-cosmetic treatment of the skin adverse effects of the chemotherapy and radiotherapy.

Learning results

After the end of the course the students will be able to know:

- The mechanism of action of the classic anticancer agents and targeted therapy, as well
- The adverse skin effects of the classic anticancer agents and the targeted therapy, as well
- The skin adverse effects of radiotherapy
- The pharmaceutical and dermato-cosmetic treatments used for the precaution or the decrease of intensity and the frequency of skin adverse effects due to chemotherapy/radiotherapy
- The systemic and topical medications indicated for the skin adverse effects in oncology patients

And will be able to:

Be members of groups of supportive dermato-oncology and to support efficiently in the clinical practice the treatment of skin adverse effects of chemotherapy, targeted therapy and radiotherapy.

General Competences *Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma* *Supplement and appear below), at which of the following does the course aim?*	
Search for, analysis and synthesis of data and information, *with the use of the necessary technology* *Adapting to new situations* *Decision-making* *Working independently* *Team work* *Working in an international environment* *Working in an interdisciplinary environment* *Production of new research ideas*	*Project planning and management* *Respect for difference and multiculturalism* *Respect for the natural environment* *Showing social, professional and ethical responsibility and* *sensitivity to gender issues* *Criticism and self-criticism* *Production of free, creative and inductive thinking* *……* *Others…* *…….*

Working independently, team work, working in an interdisciplinary environment, working in an international environment. Contact with sensitive groups of the population, research pre-graduate study in clinical practice

3. SYLLABUS

1. Supportive Dermato-oncology.
2. Classification of the anticancer drugs and their mechanism of action.
3. Classic Chemotherapy: Mitosis inhibitors (taxanes, Vinca alkaloids) and skin adverse effects: alopecia, itching, dryness, erythema, hand-foot syndrome, dark lines on the nails, abnormal development of the nails, onycholysis. Pharmaceutical and dermato-cosmetic treatment.
4. Classic Chemotherapy-Mechanism of action: Genotoxic drugs. Platinum derivatives. Intercalation compounds, inhibitors of topoisomerase I (topotecan). Skin adverse effects: erythema, itching, localized hyperpigmentation, hand-foot syndrome, alopecia. Classic chemotherapy: Antimetabolites and moderate skin adverse effects.
5. Medical camouflage (PMU) for the restoration of the eye-brows alopecia in oncology patients as a part of psychological support methods. Chemical classification of the colors used. Safety of these colors and the PMU techniques for the oncology patients.
6. Targeted therapy. Tyrosine kinase inhibitors. Inhibitors of the epidermal growth factor receptor (EGFRIs gefitinib, erlotinib, EGFR/Erb2 - lapatinib) and monoclonal antibodies (mAbs).
7. Tyrosine kinase and pustular rash and maculopapular rash. Distortion of the skin barrier. Classification of the rash according to National Cancer Institute (N.C.I) 4.03 criteria, Topical use of steroids. Calcineurin. Pharmaceutical algorithm according to the N.C.I criteria. Dermato-cosmetic preparations for the limitation of the rash.
8. EGFRIs and skin dryness-xerosis, Skin hydration preparations-ingredients-types of emulsions indicated. Bandages with emollients. EGFRIs and itching. Dermato-cosmetic methods for the treatment of itching. Pharmaceutical treatment: pregabalin and gabapentin. EGFRIs and paronychia. EGFRIs and hair growth-trichomegaly.
9. Multiple kinase inhibitors (MKIs). Vascular endothelial growth factor receptor inhibitors (VEGFRIs) and platelet derived growth factor inhibitors (PFGFRIs). VEGFRIs and rash. Classification according to 4.03 criteria (N.C.I). Xerosis. Erythrodysesthesia plaque. Dermato-cosmetics for the first stages of rush.
10. RAS-RAF-MEK-ERK inhibitors. Mechanism of action. Kinase inhibitors. BRAF inhibitors and skin adverse effects. Rash, hyperkeratosis, keratoacanthomas. Photoprotection during therapy with BRAF inhibitors.
11. MEK inhibitors. Mechanism of action and skin adverse effects. Maculopapular rash, xerosis, paronychia, pruritus.
12. Radiotherapy and targeted therapy with monoclonal antibodies. Correlation between therapy with mAbs i.e cetuximab and intensity of the rash (therapeutic index)
13. Radiotherapy and skin adverse effects, hyaluronates and antioxidants in the treatment of the skin adverse effects of radiotherapy.

4. TEACHING and LEARNING METHODS - EVALUATION

<table>
<tr><td>DELIVERY
Face-to-face, Distance learning, etc.</td><td>Face-to-face</td></tr>
<tr><td>USE OF INFORMATION ANDCOMMUNICATIONS TECHNOLOGY
Use of ICT in teaching, laboratory education, communication with students</td><td>Use of ICT in teaching, Support of learning process through e-class. Exercises through e-class.</td></tr>
<tr><td>TEACHING METHODS
The manner and methods of teaching are described in detail.
Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.

The student's study hours for each learning activity are given as well as the hours of non- directed study according to the principles of the ECTS</td><td>
<table>
<tr><th>Activity</th><th>Semester workload</th></tr>
<tr><td>Lectures</td><td>50</td></tr>
<tr><td>Independent study</td><td>40</td></tr>
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<tr><td>Course total</td><td>90</td></tr>
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<tr><td>STUDENT PERFORMANCE EVALUATION
Description of the evaluation procedure

Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open- ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other

Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</td><td>Geek language
Multiple choice questionnaires, open-ended questions, characterization of sentences as True or False, critical questions proving the understanding (100%)

Criteria are given</td></tr>
</table>

5. ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

1. Χανιώτης Φ. Φαρμακολογία, Αθήνα 2014, ISBN: 978-960-372-205-2. Εκδόσεις Κ& Ν ΛΙΤΣΑΣ ΟΕ.
2. Βενετίκου Μ και Ιατράκης Γ. Επίκαιρα θέματα Φαρμακολογίας, Αθήνα 2014, ISBN: 978-618-81414-0-7. Εκδόσεις: ΖΕΒΕΛΕΚΑΚΗΣ Γ. ΚΑΙ ΣΙΑ ΕΕ
3. Σκουρολιάκου Μ. Βασικές έννοιες στη Φαρμακολογία, Αθήνα 2017.
4. Lacouture M.E Dermatologic Principles and Practice in Oncology: Conditions of the

Skin, Hair, and Nails in Cancer Patients Edit. Lacoutoure ME, New York 2013.ISBN-13: 978-0470621882,
5. Lacouture M.E. Skin Care Guide for people living with cancer, New York 2012.

- *Related academic journals:* Journal of Cosmetic Dermatology, Journal of Medicinal Chemistry, American Journal of Dermatology