Course Outline

(1) General Information

SCHOOL	Health Sciences		
DEPARTMENT	Medicine		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE		**SEMESTER**	**7th' WINTER**
COURSE TITLE	Dysregulation of Physiological Mechanisms in Cancer: From Research to Clinical Practice		

Independent Teaching Activities (If credits are awarded separately for components such as lectures, lab sessions, etc., state them below. If credits are awarded for the whole course, include weekly hours and total credits.)	**Lecture hours per week**	**Credits**
Lectures	2	2

Course Type	Specialized background (SB)
Prerequisites:	Physiology
Language:	Greek
Available to ERASMUS students	No
Course Webpage	E-COURSE Platform

(2) LEARNING OUTCOMES

Course Objectives:
The course focuses on the physiology of cellular mechanisms and how their dysregulation can lead to cancer. Topics include the basic principles of carcinogenesis, the roles of oncogenes and tumor suppressor genes, identification of cancer-related signaling pathways, understanding the physiology of the cell cycle and cellular aging, and cancer biomarkers along with modern detection methods. Additional modules will cover principles and methodologies in basic cancer research, epidemiological studies, and clinical trials. The course also emphasizes cancer epidemiology, primary prevention (and its underlying physiological mechanisms), and secondary prevention. Principles of cancer treatment interventions and pharmaceutical approaches will be summarized. Finally, students will gain skills in searching and interpreting scientific literature. **Teaching Format and Learning Outcomes:** The course is delivered through in-person lectures. **Student workload:** 26 hours of in-class teaching **Semester:** 7th **ECTS:** 2
GENERAL COMPETENCIES
Independent work Teamwork Working in an interdisciplinary environment Generating new research ideas Searching, analyzing, and synthesizing data and information

(3) COURSE CONTENT

1. Dysregulation of the physiology of cellural mechanisms – The hallmarks of cancer 2. Principles of carcinogenesis 3. Oncogenes and tumor suppressor genes – Signaling pathways 4. Physiology of the cell cycle – Cellular aging 5. Biomarkers of cancer 6. Introduction to basic cancer research 7. Introduction to epidemiological studies and clinical trials 8. Cancer epidemiology – Primary and secondary prevention 9. Principles of therapeutic interventions and pharmaceutical management of cancer 10. Understanding and critically evaluating scientific literature **Recommended Textbook** 1. Ian Tannock, Richard Hill,Robert Bristow, Lea Harrington (2007). The Basic Science of Oncology, Parisianos Scientific Publications S.A. Book code in “Eudoxus” platform: 41897

(4) TEACHING & LEARNING METHODS – ASSESSMENT

Mode of Delivery:	Face-to-face lectures in classroom settings.
Use of ICT:	Use of computers and projectors during lectures.
Organization of teaching:	

Activity	***Student Workload (Hours)***
Lectures	26
Topic related project	12
Written assignment	8

	Independent study	14
	Total	***60***
STUDENT ASSESSMENT	Assessment Language: Greek Assessment Methods: Written examination with multiple-choice questions	

(5) RECOMMENDED TEXTBOOK

1. Ian Tannock, Richard Hill,Robert Bristow, Lea Harrington (2007). The Basic Science of Oncology, Parisianos Scientific Publications S.A. Book code in “Eudoxus” platform: 41897