Course Title	**Information Systems in Health**				
Course Code	ABS104				
Course Type	Compulsory				
Level	BSc (Level 1)				
Year / Semester	1st / Spring semester				
Instructor's Name	Dr Marios Neofytou, Mr. Skoullos Michalis				
ECTS	4	Lectures/week	2	Laboratories/week	1
Course Purpose	The health sector in Cyprus has recently undergone a major transformation with the introduction of a national health service scheme which covers all citizens. In order to manage and continually improve this new system several IT tools have been put in place in order to facilitate the providers of health services including doctors, pharmacists and clinical laboratories. The aim of the course is to introduce students to the operational aspects of these tools and define and relate concepts of information technology in the health sector. Apply knowledge of computer / information systems in practice associated with the proper functioning of the health sector. Using databases to be able to record, save, retrieve, analyze and manage medical records, submit results of analyses in clinical laboratories using the health care information systems. Students will learn how to communicate effectively with patients, families and social groups, by using technology. Students will also learn about the various IT security issues, about safeguarding confidentiality and ensuring the safe handling of computer electronic health records and related information.					
Learning Outcomes	- Describe the main elements of a computer system including peripheral and networking devices and be able to use them in order to organise, share and transfer files using a stand-alone system or in a networked environment. - Communicate through emails and send electronic documents in plain or compressed form, as attachments, using the appropriate technology. - Create and present professional presentations using the correct practices, including content, animations, transitions and timings. - Design a database and organize medical records. Create tables, design forms, write queries to extract data and design reports to present that data. - Become familiar with the automated technologies use in the analysis and documentation in Clinical Laboratories and know the systems used for uploading test results . - Classify the various technologies involved in e-health, electronic health				

	records and Telemedicine. Distinguish between the various technologies that can be used in the health sector field. - Categorize the various threats against data security and correctly select the appropriate protection solution.		
Prerequisites:	None	Corequisites:	None
Course contents:	- Introduction: Introduction to Computers. Hardware. Software. Digital Representation of Data. Multimedia Data - Introduction to Information Systems: Information Management. Database Files - Database Management Systems. - Information Systems in Health: Patient Electronic Medical Records System. Laboratory System. Management System. Examinations System. Clinical Care System. Human Resources Management System. Accountant System. Reception System. On-line Support System. Expert Medical Systems. Communications and Security Issues. Tele-Medicine - Evaluation of Information Systems in Health - Laboratory: Windows Operating System, the computer environment, and desktop issues, computer files management. Internet (Information)/E-mail (Communication) browsing (assessing, using favorites, and organizing web pages), and navigation (search engine). Electronic mail, main steps to Messaging (read, reply, and send a message; duplicate, move, and delete email text), as well as mail management (using address book, organizing messages, and printing). Presentation - Microsoft PowerPoint, main operations of the application such as insert new slide, slide design, layout and background, slide transition, Master slide, action buttons and settings, custom animation, slide show, insert picture and chart. Application software of Patient Electronic Medical Record. Evaluation of software samples available on-line (demo).		
Teaching Methodology	The teaching of the theoretical part of the course involves lectures and workgroups. For aiding teaching power point, pictures and videos are used so better understanding and consolidation of the theory of the course will be achieved. Use of the lab. Group and individual instruction. Demonstration of programs and operations from the instructor. Preparation and presentation tasks by using various software programs.		
Bibliography	**a) <u>Textbooks:</u>** Sewell, J. (2018). *Informatics and Nursing*. LWW. Αποστολάκης, Ι. & Βαρλάμης, Η. (2016), *Πληροφοριακά Συστήματα Υγείας Ηλεκτρονικές Υπηρεσίες Υγείας* (4η έκδ.). Εκδόσεις Παπαζήση **(In Greek)** ***b)* <u>References:</u>** Mantas, J. & Hasman, A. (2013). *Textbook in Health Informatics: A Nursing Perspective* (Greek translation) Paschalidis Medical Publication		

	Habraken, J. (2019). *Microsoft Office 2019 Inside Out*, Pearson Education *Through the services of the university library, access is provided to electronic repositories of scientific journals and articles, indicatively* ***ProQuest, Cambridge University Press*** and ***Science Direct*** *with thousands of scientific journals in the fields of health sciences.*
Assessment	The assessment involves one midterm examination which will represent the 20% of the final mark. This midterm will include material from the first five weeks of the theoretical material taught. One more practical midterm and 2 practical activities will be given out which will represent the 30% of the final mark. Final examination: 50%. The final examination will include multiple choice questions and closed type questions.
Language	Greek / English