MEDICAL UNIVERSITY

FACULTY OF PUBLIC HEALTH – CENTRE FOR DISTANCE LEARNING

DEPARTMENT OF PUBLIC HEALTH SCIENCES

SYNOPSIS

IN MEDICAL INFORMATICS

1.Information, nature, types, basic components. General and technical requirements for information. Scientific fields in informatics. Medical informatics.

2. Information in medicine – types, basic components, requirements..

3. Telemedicine and telemonitoring – tasks. Electronic healthcare.

4. General information on computers. Basic functional parts – purpose.

5. Representation of information. Numeral systems. Fixed and floating point. Specifics in usage of decimal numbers.

6. Inner representation of information in computers. Measurement units for binary represented information. Character encoding.

7. Logical variable and logical function. Basic logical functions. Ways for expression of logical functions.

8. General structural scheme of personal computer. Specifics in assembling of personal computers. Types of personal computers – basic concepts.

9. Basic modules and their location in computer configuration. Central processing devices. Processors – characteristics.

10. Memory of personal computers. General classification of memory and basic characteristics. Internal memory – types, purpose, features.

11. External storage devices and carriers for them – purpose, types, characteristics and specifics in usage.

12. Input-output devices for personal computers – purpose. Interfaces for information transfer with peripheral devices. Standard interfaces.

13. Devices for output of information – purpose, types. Monitors and printers – classification, basic characteristics.

14. Devices for input of information – purpose, types. Keyboards, mice, scanners – classification, basic characteristics.

15. General information on software. Types of software for personal computers – general classification, purpose.

16. Operating systems for personal computers – types, purpose. Basic functions of operating systems, usage requirements.

17. Versions of operating systems for IBM compatible computers. Microsoft's operating systems – classes, versions.

18. User interface of operating systems (OS). Basic elements in the graphical user interface of Windows. Icons and windows – types, features.

19. Information transfer between devices in computer architecture. Physical devices and their logical notation in the interface.

20. Information structures on disk carriers. Directories – nature, purpose. Directory types – specifics.

21. Files and paths. File types.

22. Creation and protection of tree structure. Searching for information.

23. Working with information structures and units – source and destination of information. Copying, moving, deletion and restoration of files and directories.

24. Preparation of external memory carriers for use with operating system. Nature of formatting. Basic information units on the carries. Carrier maintenance.

25. Computer office automation – main activities. Documents in office automation – file formats for storage, file association.

26. Text processing with office applications – basic document parameters, types, setting parameters in office automation applications.

27. Filling in text documents with text and non-text information. Formatting of text and non-text information – fonts, parameters.

28. Text paragraphs in documents – parameters, types.

29. Preparation for printing and printing of documents – requirements, specifics. Use of virtual printers for conversion in PDF format.

30. Spreadsheet applications – purpose, basic features. Spreadsheet applications – file formats.

31. Creation of documents with software applications – saving and protecting documents. Filling in the spreadsheet documents with different data types.

32. Data format in the different table elements. Sizing of spreadsheet documents. Integrated functions and different calculations in spreadsheets.

RECOMMENDED LITERATURE:

1. G. Tzanev. Selected lecture presentations, 2015, electronic issue uploaded in the System for distance learning of MU-Pleven.

2. Specialized electronic and printed issues on computer technologies.

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