****

### თბილისის ჰუმანიტარული სასწავლო უნივერსიტეტი

**TBILISI HUMANITARIAN TEACHING UNIVERSITY**

**Syllabus**

|  |  |
| --- | --- |
| **Name of the course** | **Health Information Systems** |
| **Code of the course** | **MED80En** |
| **Status of the course**  **(elective/compulsory)** | Faculty of Healthcare  One-step Higher Medical Educational Program ,,Medicine”  IV semester, **C**ourse of choice/Elecrive Course |
| **ECTS** | **3 credits.** **Total: 75 hours**  Contact Hours– 33 hours (Class Meeting Time Period:30pr.) + 3 hours  ( Midterm :1h and Final Examinations: 2h)  Individual Work- 42 hours |
| **Authors (lecturer)** | Besiki Tabatadze- Doctoral student THTU invited lecturer  Tel -.599991902  e–mail –besotabatadze84@gmail.com  Consultation days: according to consultation schedule – Monday, Wednesday, 15.00-17.00, classroom N7 |
| **Aim of the course** | The Purpose of the course is to gain a general knowledge on “Health Information System” , theoretical basics of receving medical and pharmaceutical information. During the course a student as a future doctor will become aware with the process of collection –interpretation - analysis – transmission of data within health care system. The course objective outlines as well a study of the management of diseases, basics of information system in pharmacology and pharmacotherapy , types of epidemiological surveillance and researches, raise awareness on modern task –based technologies , lab and diagnostic tools. |
| **Program prerequisits** | N/A |
| **Assessment system and criteria** | **Assessment system of the Tbilisi Humanitarian Teaching University's** is divided into the following components:  The total marks of the mid term Out of the overall assessment (100 points ) is 60 points, which includes three kinds of grades:  **Student’s activity during a semester,**  **One-midterm exam,**  **final exam** - **40 points.**  Theminimum competence requirement for mid termevaluation components is at least 11 points in total.  **The minimum competence requirement of the final evaluation is 50% of the total mark from final evaluation that means 20 points out of 40.**  Evaluation System includes:  I. Five Forms of Positive Assessment:  (A) Excellent – 91% and more from maximum evaluation  (B) Very good – 81-90% from maximum evaluation  (C) Good – 71-80% from maximum evaluation  (D) Satisfactory – 61-70% from maximum evaluation  (E) Sufficient – 51-60% from maximum evaluation  II. Two Forms of Negative Assessment:  (A)(FX) Fail (Not passed ) - 41-50 from maximum evaluation score, which means that the student will need to work more and to retake the test after additional independent work;  (B) (F) Fail – A student gets 40 points, or less from maximum evaluation, which means that the work done by him/her is not sufficient and s/he has to retake the course from the beginning.  1. One of the negative assessment: In case of not passing, the University fixes additional exam at least in 5 days, after the announcement of final examination results, which must be published in the examination table.  2. The grades, which student gets after additional test is a student's final grades, in which is not considered the negative points of the major examination.  If a student receives from 0 to 50 points after additional test, in the final exam sheet is formed (F) -0 for the student. |
| **Course description** | **appendix 1** |
| **Assessment system/** **activities, methods**  **and criteria** | The sum of the course assessment (100 points) breaks down as follows:  **Activities - 30 points** (participation)**,** is calculated in accordance with the level of being active during each practices (once a week, total number 15) type of activities can be answering questions, participation in discussion, participation in everyday testes - is equal 2 points.  2 points - s/she is active during classes, obtains perfect knowledge of the ongoing topic, answers all questions completely.  1,0 points - s/he is less active during classes, does not present perfect knowledge of the ongoing topic, answers questions partly.   1. - s/he is less active during classes/group works, does not present perfect knowledge of the ongoing topic, does not answer any questions.   **Midterm exam - 30 points.** (administered in written form (the test).  **Final Exam -40 points** administered in written form (the test), the number of questions– 60, there are given four options, and the best one should be chosen.  **Final Exam -40 points** administered in written form (the test), the number of questions– 80, there are given four options, and the best one should be chosen. The correct answer is worth 0.5 points. (Duration 2 h) |
| **Core literature:** | 1. Patrick W. O'Carroll, William A. Yasnoff, etc., Public Health Informatics and Information Systems, Health Informatics Series |
| **Additional literature** | 1. Michael Miller, Easy Computer Basics |
| **Learning outcomes, competences**  **(general and field specific)** | **Knowledge**  Student defines basis of informatics, types of medical informationand knows systems of ultrasound research.  **Skills**  Students can conduct of epidemiological researches,  Student can use of medical appliances during the process of patient informing and care. |
| **Learning / Teaching methods** | Practical studies  Individual/Group work |

**Appendix 1**

**Course description:**

**Topics of the lecture, practical classes/laboratory work/working group, literature**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Week №** | **Type of**  **the class** | **Topics** | **Contact hours** | **literature** |
| **I week** | Pract. | Notion of information, Health Information System, informatory processes in healthcare, [Community Health Informatics](http://en.wikipedia.org/wiki/Health_informatics) , [Computational Health Informatics](http://en.wikipedia.org/wiki/Health_informatics). | **2** | **1** |
| **II week** | Pract. | Types of Health Information System – Task-based IS,  Subject – based IS , Master Patient Index ,Decision support systems, Care Access Internet Systems, Electronic health Record. | **2** | **1** |
| **III week** | Pract. | [Health information technology](http://en.wikipedia.org/wiki/Health_information_technology), [information science](http://en.wikipedia.org/wiki/Information_science), [computer science](http://en.wikipedia.org/wiki/Computer_science), [social science](http://en.wikipedia.org/wiki/Social_science), [behavioral science](http://en.wikipedia.org/wiki/Behavioral_science), management science. | **2** | **1** |
| **IV week** | Pract. | Basis of bioinformatics, amount of information. Informative processes in biology and medicine. MI in Biostatistics and Bioinformatics , [Structural bioinformatics](http://en.wikipedia.org/wiki/Bioinformatics) , [Network and systems biology](http://en.wikipedia.org/wiki/Bioinformatics) - [interaction networks](http://en.wikipedia.org/wiki/Bioinformatics), Biological data. | **2** | **1** |
| **V week** | Pract. | Recommendations of WHO and Clinical Guidelines, Management of diseases. | **2** | **1** |
| **VI week** | Pract. | Scientific technical information about means of treatment.  Users and sources of medical information . | **2** | **1** |
| **VII week** | Pract. | Medical information in rational Pharmacotherapy.  Medical Informatics in Pharmacology. | **2** | **1** |
| **VIII week** | **Midterm** | | 1 |  |
| **IX week** | Pract. | Medical communications in Health Information System and in Medical IT. | **2** | **1** |
| **X**  **week** | Pract. | Health Information Systems of leading foreign countries, HIS resources of the developed countries. | **2** | **1** |
| **XI week** | Pract. | Coefficient -Correlation in Information System of Health care. Dependent and independent variables . | **2** | **1** |
| **XII week** | Pract. | Health care development strategy, Sustainable Development Strategy for the Healthcare System & Marketing Development in a competitive health care market, health care organizations. Understanding Customer Needs in strategy development. Health care organizations for achieving positive health care outcomes. | **2** | **1** |
| **XIII week** | Pract. | Epidemiology in informative researches , distribution of diseases in populations, identifying and quantifying the health risks , types of epidemiological studies. | **2** | **1** |
| **XIV week** | Pract. | Systems of ultra sound researches. Multifunctional systems. Prosthetic systems and artificial organs. Medical equipment – perspectives for development of computerized system. | **2** | **1** |
| **XV week** | Pract. | Main statistical features, central data of distribution, indicators of variety of distribution. | **2** | **1** |
| **XVI week** | Pract. | Presentation of data in diagrams. Qualitative and quantitative data. Histograms, frequency polygon, bar charts , pie charts. | **2** | **1** |
| **XVII -XVIII week** | **Final Exam** | | 2 |  |
| **XIX-XX week** | **Additional exam** | |  |  |