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| **Syllabus 2018/2019** | | | | | | | | | | | | | | | | | | | | |
| **Description of the course** | | | | | | | | | | | | | | | | | | | | |
| **Module/Course** | | | | | | **Medical statistics** | | | | | | | | **Group of detailed education results** | | | | | | |
| **Group code**  **D** | | **Group name**  Behavioral and social sciences with elements of professionalism | | | | |
| **Faculty** | | | | | | Dentistry | | | | | | | | | | | | | | |
| **Major** | | | | | | Dentistry | | | | | | | | | | | | | | |
| **Specialties** | | | | | |  | | | | | | | | | | | | | | |
| **Level of studies** | | | | | | Uniform magister studies X  1st degree studies  2nd degree studies  3rd degree studies  postgraduate studies | | | | | | | | | | | | | | |
| **Form of studies** | | | | | | X full-time X part-time | | | | | | | | | | | | | | |
| **Year of studies** | | | | | |  | | | | | | **Semester** | | | X Winter  Summer | | | | | |
| **Type of course** | | | | | | X obligatory  limited choice  free choice / elective | | | | | | | | | | | | | | |
| **Course** | | | | | | major basic | | | | | | | | | | | | | | |
| **Language of instruction** | | | | | | Polish X English other | | | | | | | | | | | | | | |
| \* mark with an **X** | | | | | | | | | | | | | | | | | | | | |
| **Number of hours** | | | | | | | | | | | | | | | | | | | | |
| Form of education | | | | | | | | | | | | | | | | | | | | |
| Unit teaching the course | | | Lectures (L) | Seminars (SE) | Auditorium classes (AC) | | Major Classes – not clinical (MC) | Clinical Classes (CC) | Laboratory Classes (LC) | Classes in Simulated Conditions (CSC) | Practical Classes with Patient (PCP) | | Specialist Classes – magister studies (SCM) | Foreign language Course (FLC) | Physical Education obligatory (PE) | Vocational Practice (VP) | | Self-Study (Student's own work) | E-learning (EL) | |
| **Winter Semester** | | | | | | | | | | | | | | | | | | | | |
|  | | |  |  |  | |  |  |  |  |  | |  |  |  |  | |  |  | |
|  | | |  |  |  | |  |  |  |  |  | |  |  |  |  | |  |  | |
| **Summer Semester** | | | | | | | | | | | | | | | | | | | | |
|  | | |  |  |  | |  |  | **15** |  |  | |  |  |  |  | |  |  | |
|  | | |  |  |  | |  |  |  |  |  | |  |  |  |  | |  |  | |
| **TOTAL per year:** | | | | | | | | | | | | | | | | | | | | |
|  | | |  | |  | |  |  | **15** |  |  | |  |  |  |  | |  |  | |
|  | | |  | |  | |  |  |  |  |  | |  |  |  |  | |  |  | |
| **Educational objectives** (max. 6 items)  **C1.**  **C2.**  **C3.** | | | | | | | | | | | | | | | | | | | | |
| **Education result matrix for module/course in relation to verification methods of the intended education result and the type of class** | | | | | | | | | | | | | | | | | | | | |
| Number of course education result | | Number of major education result | | | | Student who completes the module/course knows/is able to | | | | | | | Methods of verification of intended education results (forming and summarising) | | | | Form of didactic class  *\*\*enter the abbreviation* | | | |
| **U 01** | | **D.U15** | | | | solve basic statistical problems,  select appropriate statistical methods for basic research systems | | | | | | | Final computer test - statistical study with data analysis and interpretation of results | | | | LC | | | |
| **U 02** | | **D.U15** | | | | use computer programs to process information | | | | | | | Final computer test - statistical study with data analysis and interpretation of results | | | | LC | | | |
| **U 03** | | **D.U15** | | | | perform statistical tests in MS Excel and/or Statistica package | | | | | | | Final computer test - statistical study with data analysis and interpretation of results | | | | LC | | | |
| **U 04** | | **D.U15** | | | | interpret the results of statistical analyzes | | | | | | | Final computer test - statistical study with data analysis and interpretation of results | | | | LC | | | |
| **U 05** | | **D.U15** | | | | understand statistical results presented in medical articles | | | | | | | Final computer test - statistical study with data analysis and interpretation of results | | | | LC | | | |
| \*\* L - lecture; SE - seminar; AC – auditorium classes; MC – major classes (non-clinical); CC – clinical classes; LC – laboratory classes; SCM – specialist classes (magister studies); CSC – classes in simulated conditions; FLC – foreign language course; PCP practical classes with patient; PE – physical education (obligatory); VP – vocational practice; SS – self-study, EL – E-learning . | | | | | | | | | | | | | | | | | | | | |
| Please mark on scale 1-5 how the above effects place your classes in the following categories: communication of knowledge, skills or forming attitudes:  Knowledge: ++  Skills: +++  Social competences: + | | | | | | | | | | | | | | | | | | | | |
| **Student's amount of work (balance of ECTS points)** | | | | | | | | | | | | | | | | | | | | |
| **Student's workload**  (class participation, activity, preparation, etc.) | | | | | | | | | | | | | | **Student Workload (h)** | | | | | | |
| 1. Contact hours: | | | | | | | | | | | | | | 15 | | | | | | |
| 2. Student's own work (self-study): | | | | | | | | | | | | | | 10 | | | | | | |
| Total student's workload | | | | | | | | | | | | | | 25 | | | | | | |
| **ECTS points for module/course** | | | | | | | | | | | | | | 1 | | | | | | |
| Comments | | | | | | | | | | | | | |  | | | | | | |
| **Content of classes** (please enter topic words of specific classes divided into their didactic form and remember how it is translated to intended educational effects) | | | | | | | | | | | | | | | | | | | | |
| **Lectures**  1. | | | | | | | | | | | | | | | | | | | | |
| **Seminars**  1. | | | | | | | | | | | | | | | | | | | | |
| **Practical classes**  1. Basic statistical concepts and experimental systems used in medical research. Study of relationships.  2. Graphical presentation of relationships between two variables. Elements of epidemiology: relative risk, odds ratio, sensitivity and specificity of diagnostic tests.  3. Practical application of basic statistical tests in exemplary medical research- Chi-square test.  4. Practical application of basic statistical tests in exemplary medical tests- Student's t-test for independent and dependent samples.  5. Practical application of basic statistical tests in exemplary medical research- analysis of variance.  6. Use of linear regression and correlation coefficient in medical research. | | | | | | | | | | | | | | | | | | | | |
| **Other**  **1.**  **2.**  **3.**  *etc. …* | | | | | | | | | | | | | | | | | | | | |
| **Basic literature** (list according to importance, no more than 3 items)  1. . B.R. Kirkwood, J.A. Sterne – Essential Medical Statistics, Blackwell Science 1988, 2003  2.  **Additional literature and other materials** (no more than 3 items)  1. B. Rosner – Fundamentals of Biostatistics, Duxbury Thomson Learning 2000  2.. | | | | | | | | | | | | | | | | | | | | |
| **Didactic resources requirements** (e.g. laboratory, multimedia projector, other…)  Computer laboratory, multimedia projector | | | | | | | | | | | | | | | | | | | | |
| **Preliminary conditions** (minimum requirements to be met by the student before starting the module/course)  Student should have the credit of the subject *Information Technology* | | | | | | | | | | | | | | | | | | | | |
| **Conditions to receive credit for the course** (specify the form and conditions of receiving credit for classes included in the module/course, admission terms to final theoretical or practical examination, its form and requirements to be med by the student to pass it and criteria for specific grades)  The final test consists of five tasks for the application of four basic tests: chi-square test, Student's t-test for independent and for dependent samples and a t-test for the correlation coefficient. Each student can receive 1 point for correct formulation of the null hypothesis, use of the proper statistical method (obtaining p), application of the correct decision rule and final conclusion. Student can get 4 points for one task. Thus, student can get up to 20 points. To pass the subject, it is enough to score at least 10 points. | | | | | | | | | | | | | | | | | | | | |
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| **Grade:** | | | **Criteria** (only for courses/modules ending with an examination) | | | | | | | | | | | | | | | | | | |
| Very Good  (5.0) | | | 17-20 points from the final test | | | | | | | | | | | | | | | | | | |
| Good Plus  (4.5) | | | 15-16 points from the final test | | | | | | | | | | | | | | | | | | |
| Good  (4.0) | | | 13-14 points from the final test | | | | | | | | | | | | | | | | | | |
| Satisfactory Plus  (3.5) | | | 11-12 points from the final test | | | | | | | | | | | | | | | | | | |
| Satisfactory  (3.0) | | | At least 10 points from the final test | | | | | | | | | | | | | | | | | | |
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| **Name and address of module/course teaching unit, contact: telephone and e-mail address** Biostatistics and Medical Informatics Unit of Department of Pathophysiology  tel.71 784 12 69, 603 129 009  leslaw.rusiecki@umed.wroc.pl  **Coordinator / Person responsible for module/course, contact: telephone and e-mail address**  Lesław Rusiecki, 71 784 12 69, 603 129 009, leslaw.rusiecki@umed.wroc.pl  **List of persons conducting specific classes: full name, degree/scientific or professional title, discipline, performed profession, form of classes**.  Dr n.med. Lesław Rusiecki, biostatistics, classes   |  |  | | --- | --- | | **Date of Syllabus development** | **Syllabus developed by** | | 25th June 2018 | Lesław Rusiecki | | **Signature of Head of teaching unit** | | | ……………....……………………………………………………………… | |   **Signature of Faculty Dean** | | | | | | | | | | | | | | | | | | |
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