**description of the course of study**

|  |  |
| --- | --- |
| **Course code** | **0912-7LEK-F-3-ASMŻ** |
| **Name of the course in** | Polish | **Aktywne składniki materii żywej** |
| English | **Active ingredients of living matter** |

1. **LOCATION OF THE course OF STUDY within the system of studies**

|  |  |
| --- | --- |
| **1.1. Field of study** | Medicine |
| **1.2. Mode of study** | Full-time |
| **1.3. Level of study** | Uniform Master’s studies |
| **1.4. Profile of study\*** | General academic |
| **1.5. Person preparing the course description** | dr Magdalena Marcinkowska, dr Dariusz Wideł |
| **1.6. Contact** | Magdalena.Marcinkowska@ujk.edu.pldariusz.widel@ujk.edu.pl  |

1. **General characteristicS of the course of study**

|  |  |
| --- | --- |
| **2.1. Language of instruction** | English |
| **2.2. Prerequisites\*** | Knowledge of the basis of general and organic chemistry |

1. **DETAILED CHARACTERISTICS OF THE COURSE OF STUDY**

|  |  |
| --- | --- |
| * 1. **Form of classes**
 | lecture – 15 hours (including 5 e-learning) |
| * 1. **Place of classes**
 | lecture room, Faculty of Medicine UJK |
| * 1. **Form of assessment**
 | credit with grade |
| * 1. **Teaching methods**
 | Informative lecture |
| * 1. **Bibliography**
 | **Required reading** | 1. An Introduction to General, Organic, and Biological Chemistry, Global Edition Autor: Timberlake Karen, ed. By Pearson Higher Education , 2015
2. Textbook of Medical Biochemistry, Eighth Edition, MN Chatterjea, Rana Shinde, JP Medical Ltd, 2011
3. Principles of Biochemistry: Pearson New International Edition, Laurence A. Moran , Robert A. Horton , Gray Scrimgeour Marc Perry, Pearson Education Ltd., 2013
 |
|  **Further reading** | 1. Organic Chemistry – 8th edition, John E. McMurry, Cengage Learning, 2011
 |

1. **Objectives, syllabus CONTENT and intended LEARNING outcomes**

|  |
| --- |
| * 1. **Course objectives (lecture)**

***C1.***Introduction with basic issues concerning vitamins, macro- and microelements and organic compounds with metals present in living organism.  |
| * 1. **Detailed syllabus (lecture)**

Micro- and macroelements. Metal compounds in organism and medicine. Vitamins – division and characterization of groups. The role of vitamins in organism, result of deficiency and excess. Bioactivity of vitamins. Results of avitaminosis and hypervitaminosis. Oxidative stress – causes. Reactive forms of oxygen. The influence of oxidative stress on organism. Antioxidants.  |

**4.3Intended learning outcomes**

|  |  |  |
| --- | --- | --- |
| **Code** | **A student, who passed the course** | **Relation to learning****outcomes** |
| within the scope of **knowledge**, the graduate knows and understands: |
| W01 | the metabolic profiles of basic organs and systems; | B.W16. |
| W02 | the influence of the oxidative stress on cells and its importance in the pathogenesis of diseases and in aging processes; | C.W47. |
| W03 | the consequences of vitamins or minerals deficiency and their excess in the body; | C.W48. |
| within the scope of **ABILITIES**, the graduate knows how to: |
| U01 | envisage the development of biochemical processes depending on the state of the cells’ energy; | B.U6. |
| U02 | perform simple function tests evaluating the human body as a system stable regulation (stress tests) and interpret the figures on the basic physiological variables; | B.U7. |
|  | within the scope of **SOCIAL COMPETENCE**, the graduate is able to: |  |
| K01 | recognize his/her own limitations and self-evaluate educational deficiencies and needs; | H.S5 |
| K02 | use reliable information sources; | H.S7 |
| K03 | give opinions concerning various aspects of professional activity; | H.S10 |
| K04 | take responsibility for own decisions made during professional activities including own safety and safety of other people; | H.S11 |

|  |
| --- |
| * 1. **Methods of assessment of the intended learning outcomes**
 |
| **Teaching** **outcomes*****(code)*** | **Method of assessment (+/-)** |
| **Exam oral/written\*** | **Test\*** | **Project\*** | **Effort** **in class\*** | **Self-study\*** | **Group work\***  | **Others\*****Observation** |
| ***Form of classes*** | ***Form of classes*** | ***Form of classes*** | ***Form of classes*** | ***Form of classes*** | ***Form of classes*** | ***Form of classes*** |
| *L* | *C* | *…* | *L* | *C* | *…* | *L* | *C* | *…* | *L* | *C* | *…* | *L* | *C* | *…* | *L* | *C* | *…* | *L* | *C* | *…* |
| W01 |  |  |  | + |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| W02 |  |  |  | ***+*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| W03 |  |  |  | ***+*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| U01 |  |  |  | ***+*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| U02 |  |  |  | ***+*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| K01-K04 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ***+*** |  |  |

***\*delete as appropriate***

|  |
| --- |
| * 1. **Criteria of assessment of the intended learning outcomes**
 |
| **Form of classes** | **Grade** | **Criterion of assessment** |
|  **lecture (L)** | **3** | Achievement 61 - 68% of the total number of points from written test |
| **3,5** | Achievement 689- 76% of the total number of points from written test |
| **4** | Achievement 77- 84% of the total number of points from written test |
| **4,5** | Achievement 85 - 92% of the total number of points from written test |
| **5** | Achievement 93- 100% of the total number of points from written test |

* [**Thresholds**](https://pl.bab.la/slownik/angielski-polski/thresholds) **are valid from 2018/ 2019 academic year**
1. **BALANCE OF ECTS CREDITS – STUDENT’S WORK INPUT**

|  |  |
| --- | --- |
| **Category** | **Student’s workload** |
| **Full-time****studies** |
| *NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE TEACHER /CONTACT HOURS/* | **15** |
| *Participation in lectures\** | **10** |
| *Participation in classes, seminars, laboratories\** |  |
| *Preparation in the exam/ final test\** |  |
| *Others\** | **51** |
| *INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/* | **10** |
| *Preparation for the lecture\** |  |
| *Preparation for the classes, seminars, laboratories\** |  |
| *Preparation for the exam/test\** | **10** |
| *Gathering materials for the project/Internet query\** |  |
| *Preparation of multimedia presentation* |  |
| *Others\** |  |
| *TOTAL NUMBER OF HOURS* | **25** |
| ECTS credits for the course of study | **1** |

***Accepted for execution*** *(date and signatures of the teachers running the course in the given academic year)*

 *.......................................................................................................................*

1 e-learning (without participation of the lecturer)