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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Polish name of the course: | | GIS w rolnictwie | | | | | | | | ECTS | 2 |
| English name of the course: | | GIS in agriculture | | | | | | | | | |
| Name of study | | Organic agriculture and food production | | | | | | | | | |
|  | |  | | | | | | | | | |
| Language: | | English | | | | Study level: | | | I | | |
| Study status: | ⌧full-time  🞎part-time | Status of the course: | 🞎 basic  ⌧professional | 🞎obligatory  ⌧elective | | Semester: 5 | | | ⌧winter semester 🞎spring semester | | |
|  |  | description applies from the academic year (year): | | | | 2020/2021 | Catalog number : | | ROL-ER-… | | |
|  | | | | | | | | | | | |
| Coordinator of the course5 | | dr hab. Dariusz Gozdowski | | | | | | | | | |
| Teachers : | | dr hab. Dariusz Gozdowski | | | | | | | | | |
| Conducting unit: | | Department of Biometry | | | | | | | | | |
| Unit ordering classes : | | Faculty of Agriculture and Biology | | | | | | | | | |
| Goals and description of the course: | | **Goal:**  To learn students basics of GIS (Geographic Information Systems) technologies and the possibilities of their application in agriculture. Creation of maps with different geographic scope and analysis of spatial data with particular emphasis on data used in agriculture (soil maps, maps of agricultural parcels, etc.).    **Description**: The aim of the course is to familiarize students with the basics of creating maps with the use of GIS software, applications of geographic data in agriculture and the protection of the agricultural environment. The scope of the course also includes methods used in the analysis of geographic data, including elements of spatial statistics. Students will be familiarized with the possibilities of general-purpose GIS software and dedicated to precision farming. | | | | | | | | | |
| Didactic forms, number of hours : | | W - lecture, hours 15  LC - laboratory exercises, hours 15 | | | | | | | | | |
| Teaching methods : | | Problem solving, case study, work under the guidance of the teacher | | | | | | | | | |
| Formal requirements  and initial assumptions : | | lack | | | | | | | | | |
| Learning outcomes : | | Kowledge:  W1 - knows the methods of collecting geographic data in the form of vector and raster files and the sources of such data  W2 – knows the rules for creating maps with different geographical coverage (from farm maps to maps covering large regions) | | | Skills:  U1 – knows how to prepare maps using vector and raster files,  U2 - knows how to convert geographic data from various formats, including vectorize a paper map to a digital version | | | Competence :  K1 – Is able to analyze geographic data using GIS software  K2 - is able to make conclusions based on the conducted spatial analyses | | | |
| The verification way of learning outcomes : | | W1, W2 – exam which tests theoretical knowledge  U1, U2, K1, K2– practical exams which tests practical knowledge | | | | | | | | | |
| Form of documentation achieved learning outcomes: | | The content of exam questions with an electronic grade, tests stored in an electronic form, a partial grade card in an electronic form. | | | | | | | | | |
| Elements and weights with the impact on the final grade: | | Exam in the lecture part 45%; passing exercises - 50%; assessment of student activity during classes - 5% | | | | | | | | | |
| Place for course: | | Lectures - classroom, exercises - computer laboratory | | | | | | | | | |
| Basic and complementary literature:  materials preparing by teacher  <http://www.qgis.org/en/docs/index.html>  Kurt Menke. Discover QGIS 3.x - A Workbook for Classroom or Independent Study - https://locatepress.com/dq3 | | | | | | | | | | | |
| Comments | | | | | | | | | | | |

Quantitative indicators characterizing the module / course:

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| --- | --- |
| Estimated total number of student work hours (contact and own work) necessary to achieve the expected learning outcomes – based on this, complete the ECTS field: | 60 h |
| The total number of ECTS points that a student obtains in classes requiring direct participation of academic teachers or other persons conducting classes (consultations, cooperation with a supervisor): | 1.5 ECTS |

Table of compliance of the directional learning outcomes with the effects of the course:

|  |  |  |  |
| --- | --- | --- | --- |
| effect category | Learning outcomes for the course: | Reference to effects for the study program for the field of study | The impact of the course on the field effect \*) |
| Knowledge –W1 | knows the methods of collecting geographic data in the form of vector and raster files and the sources of such data | KW\_03 | 2 |
| Knowledge –W2 | knows the rules for creating maps with different geographical coverage (from farm maps to maps covering large regions) | KW\_03 | 2 |
| Skills –U1 | knows how to prepare maps using vector and raster files | KU\_04 | 1 |
| Skills – U2 | knows how to convert geographic data from various formats, including vectorize a paper map to a digital version | KU\_04, KU\_07 | 1 |
| Competence –K1 | Is able to analyze geographic data using GIS software | KU\_04, K\_S02 | 2 |
| Competence –K2 | is able to make conclusions based on the conducted spatial analyses | KU\_04, KU\_07, K\_S02 | 2 |

\*)

3 - advanced and detailed,

2 - significant,

1 - basic,