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| **Course code** | CC2 |
| **Type and description** | CC2 - core curriculum for food technology and nutrition |
| **ECTS credit** | 1 |
| **Course name** | Phytocompounds as bioactive food ingredients |
| **Course name in Polish** | Fitozwiązki jako bioaktywne składniki żywności |
| **Language of instruction** | English |
| **Course level** | 8 PRK |
| **Course coordinator**  | Dr hab. inż. Anna Podsędek |
| **Course instructors** | Dr inż. Małgorzata Redzynia, Dr inż. Małgorzata Zakłos-Szyda |
| **Delivery methods and course duration** |

|  | **Lecture** | **Tutorials** | **Laboratory** | **Project** | **Seminar** | **Other** | **Total of teaching hours during semester** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Contacthours |  |  | 15 |  |  | 0 | 15 |
| E-learning | No | No | No | No | No | No |  |
| Assessmentcriteria (weightage) |  |  | 100,00 |  |  |  |  |

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| **Course objective** | Students’ acquaintance with the methods of analysis of the composition of phytochemicals and their pro-health activity by *in vitro* methods |
| **Learning outcomes** | After completing the course, a PhD student is able to1. prepare extracts of phenolic compounds, antioxidant vitamins, and pigments from plant material, 2. characterize the qualitative and quantitative composition of phytochemicals by chromatographic methods,3. determine the antioxidative potential by various methods,4. link biological activity of phytochemicals with their composition. |
| **Assessment methods** | Learning outcomes 1-4. Written reports from laboratory classes containing results of analyses and discussion with published data,Final assessment includes:The result of reports: 100% |
| **Prerequisites** | Knowledge of organic chemistry, biochemistry |
| **Course content with delivery methods** | 1. Preparation of extracts of phenolic compounds, antioxidant vitamins, pigments from plant material2. Determination of the qualitative and quantitative composition of selected phytochemicals by chromatographic methods 3. Determination of antioxidative activity in various measurement systems4. Study of the effect of phytochemicals on oxidative stress of cells *in vitro* |
| **Basic reference materials** | Scientific journals available in the library network of the Lodz University of Technology |
| **Other reference materials** |  |
| **Average student workload outside classroom** | 10 h |
| **Comments** |  |
| **Last update** |  |