

Educational outcomes for doctoral studies in Physics, Astronomy or Biophysics

| Outcome symbol | Outcome definition | Code of description factor by Polish Qualification Framework-level 8 ¹ |
|--|--|---|
| Knowledge: graduate knows and understands | | |
| W01 | Has extended knowledge of theories and concepts in the field of Physical Sciences | P8S_WG |
| W02 | Knows the most important and most recent scientific discoveries in Physics/ Astronomy/Biophysics | P8S_WG |
| W03 | Understands the methodology, structure and history of the development of Physics/Astronomy/Biophysics, as well as the fundamental problems and dilemmas of civilization related to them. | P8S_WG P8S_WK |
| W04 | Has detailed knowledge in the specific field of Physics/Astronomy/ Biophysics which includes the subject of their doctoral thesis, as well as knows appropriate bibliography | P8S_WG |
| W05 | Knows how to use the tools of theoretical/experimental/observational Physics, including the apparatus of higher Mathematics and computer sciences to describe physical processes and solve problems | P8S_WG |
| Skills | | |
| U01 | Can collect literature devoted to a given topic and analyze it critically | P8S_UW |
| U02 | Possesses a basic set of skills to solve a scientific problem, to formulate tasks leading to problem-solving, to reason, to conclude and to develop on their own | P8S_UW |
| U03 | Can comprehensively present the results of their own work, as well as summarize others' publications in the form of an academic dissertation, a publication, oral conference report, seminary report or poster | P8S_UK |
| U04 | Has a good command of English, allowing for free oral and written communication, presenting own reports and understanding works by others. | P8S_UK |
| U05 | Can plan and/or co-realize individual and/or joint research project | P8S_UO |

¹ Zgodnie z załącznikiem do rozporządzenia Ministra Nauki i Szkolnictwa Wyższego z dnia 26 września 2016 r. (poz.1594)

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|---------------------------|---|--------|
| U06 | Has basic experience in teaching Physics/Astronomy/Biophysics at the academic level, including the use of modern teaching methods. | P8S_UU |
| U07 | Is capable of self-education, and understands the need of constant education and inspiring others to acquire knowledge. | P8S_UU |
| Social competences | | |
| K01 | Understands the civilizational and social value of science and scientific research, is ready to critically evaluate own or other people's findings. | P8S_KK |
| K02 | Knows the basic rules of organizing scientific research and applying for funding, as well as the rules of a university's functioning in terms of research and didactics. | P8S_KO |
| K03 | Knows and understands the role of a researcher, has the sense of necessity to conduct research in a reliable, and independent manner, respects the rules of public ownership of research findings and the rules of protecting intellectual property | P8S_KR |

Educational outcomes are in operations since academic year2017/2018...

Educational outcomes were confirmed at the meeting of the Board of the Faculty of Physics, Astronomy and Informatics on 21.06.2017.

(Faculty name)

(date of the meeting)

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(Dean's signature)