Załącznik nr 10

do Programu Kształcenia w ISD PŁ – ścieżka kształcenia w dyscyplinie Nauki Fizyczne

**TRAINING PROGRAM IN DISCIPLINE:**

**Physical Sciences**

1. Basic information

*Domain: Natural Sciences*

*Discipline: Physical Sciences*

*Degree awarded: PhD in Physical Sciences*

*Program Coordinator:*

*Name: dr hab. inż.. Jolanta Prywer, prof. PŁ*

*Email:* *jolanta.prywer@p.lodz.pl*

1. Lecturers

|  |  |  |  |
| --- | --- | --- | --- |
| No | Name and surname | Title/degree | Website/ORCID |
| 1. | Jolanta Prywer | dr hab. inż. prof. PŁ | https://fizyka.p.lodz.pl/en/employees/ |
| 2. | Jaromir Tosiek | dr hab. inż. | https://fizyka.p.lodz.pl/en/employees/ |
| 3. | Michał Dobrski | dr inż. | https://fizyka.p.lodz.pl/en/employees/ |
| 4. | Katarzyna Pernal | prof. dr hab. | https://fizyka.p.lodz.pl/en/employees/ |
| 5. | Ewa Pastorczak | dr inż. | https://fizyka.p.lodz.pl/en/employees/ |
| 6. | Tomasz Czyszanowski | dr hab. inż. prof. PŁ | https://fizyka.p.lodz.pl/en/employees/ |
| 7. | Michał Wasiak | dr hab. inż. | https://fizyka.p.lodz.pl/en/employees/ |
| 8. | Maciej Dems | dr hab. inż. | https://fizyka.p.lodz.pl/en/employees/ |
| 9. | Mariola Buczkowska | dr hab. inż. | https://fizyka.p.lodz.pl/en/employees/ |
| 10. | Włodzimierz Kucharczyk | prof. dr hab. | https://fizyka.p.lodz.pl/en/employees/ |

3. Training demand

The PhD training program in physics prepares the PhD candidates for work in research units, research and development units, universities - especially technical universities. The aim of the training program is to gradually introduce a candidate to research work and expose her/him to the latest achievements and scientific results in the discipline of physics. In science faculties of both technical universities and universities, there is a "generation gap" among those conducting research. There is a need for staff trained to conduct research and didactic work at faculties of exact sciences.

4. Detailed entry requirements

Completing the Master's Degree, or equivalent, in physics, chemistry or other disciplines of science, allowing a candidate to undertake a PhD program in physics.

5. Teaching methods

Lectures, tutorials, laboratory, seminars, participation in workshops, conferences. Collaborative work in research groups.

6. Graduate’s profile

After completing a program in physics and obtaining a PhD degree a graduate not only has an extensive knowledge in this discipline, but also has the ability to set, analyze and propose solutions to problems and their synthetic description. A graduate is capable of establishing collaborations and conducting team research projects.

7. Training plan

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Semester 1** | | | | | | | | | | |
| No. | Abbreviation | Course name |  | | | | | | ECTS | |
| L | T | L | P | S | Σ | |  |
| 1 | E | Entrepreneurship | 15 |  |  |  |  | 15 | | 1 |
| 2 | CC1 | Current trends in physical sciences 1 |  |  |  |  |  | 15 | | 1 |
| 3 | CC5 | Advanced research planning and management in physical sciences 1 |  |  |  |  |  | 15 | | 1 |
| Total | | |  |  |  |  |  | 45 | | 3 |
| **Semester 2** | | | | | | | | | | |
| No. | Abbreviation | Course name |  | | | | | | ECTS | |
| L | T | L | P | S | Σ | |
| 1 | CC2 | Current trends in physical sciences 2 |  |  |  |  |  | 15 | | 1 |
| 2 | CC6 | Advanced research planning and management in physical sciences 2 |  |  |  |  |  | 15 | | 1 |
| Total | | |  |  |  |  |  | 30 | | 2 |
| **Semester 3** | | | | | | | | | | |
| No. | Abbreviation | Course name |  | | | | | | ECTS | |
| L | T | L | P | S | Σ | |
| 1 | CC3 | Current trends in physical sciences 3 |  |  |  |  |  | 15 | | 1 |
| 2 | CC7 | Advanced research planning and management in physical sciences 3 |  |  |  |  |  | 15 | | 1 |
| Total | | |  |  |  |  |  | 30 | | 2 |
| **Semester 4** | | | | | | | | | | |
| 1 | CC4 | Current trends in physical sciences 4 |  |  |  |  |  | 15 | | 1 |
| 2 | CC8 | Advanced research planning and management in physical sciences 4 |  |  |  |  |  | 15 | | 1 |
| Total | | |  |  |  |  |  | 30 | | 2 |
| **TOTAL** | | |  |  |  |  |  | **135** | | **9** |