**EK 11**

**Science Education PhD Program Outcomes (PO)**

1. Develops and deepens the knowledge in the field of science education and reaches original results that will bring innovation to science.

2. Internalize pedagogical (educational) knowledge and skills related to science teaching; know and apply learning, teaching, measurement and evaluation methods and techniques.

3. Knows the developmental characteristics, learning styles and difficulties of students in the psychological and pedagogical framework and makes effective planning, material development and application in accordance with these characteristics.

4. Use information and communication technologies effectively in teaching science related concepts.

5. Identifies a problem situation in the field of science education, develops solutions for the problem, collects data for it, analyses and reports the data using quantitative and qualitative research methods.

6. Follows, learns and uses national and international developments and changes in science education.

7. Actively participates in team works in scientific research and projects, fulfils own responsibilities, is open to cooperation and leads when necessary.

8. Adopts the philosophy of lifelong learning, produces projects and activities with a sense of social responsibility for the social environment.

9. Develop scientific and analytical thinking skills.

10. Develops new ideas and methods in science education by using higher order thinking skills such as critical thinking, problem solving and decision making.

11. Carries out studies in the field of science education considering social, scientific, cultural and ethical values.

12. Follows the developments in the fields of science, technology, society and environment, and the activities in the fields of science, art and culture.

13. Pays attention to have information about general cultural at the level of conducting interdisciplinary studies and associating them with different disciplines.

14. Transfer ideas and thoughts in writing and orally about the field of science education accurately and effectively.