

Benha University Faculty of Science Department of Physics



Standard Criteria for Postgraduate Programs (NAQAAE) Ph.D.

Graduate of the doctoral program in any discipline must be able to:

- 1. Master the basics of scientific and research methodologies
- 2. The ongoing work on the addendum to the knowledge in the area of specialization
- **3.** The application of the analytical method and critic of knowledge in the area of specialization and related fields
- **4.** Combine specialized knowledge with knowledge relationship and developer of bilateral relations
- 5. Show and deep awareness of current problems and modern theories in the area of specialization
- **6.** Professional identify problems and find innovative solutions to solve them
- 7. Mastery of a wide range of professional skills in the area of specialization
- 8. The trend towards the development of methods, tools and new methods of professional practice
- 9. The use of appropriate technological means to serve the professional practice
- 10. Communicate effectively and lead a team work in various professional contexts
- 11. Decision-making in light of the information available
- 12. Employment of available resources efficiently and develop and work on finding new resources
- 13. Awareness of its role in the development of society and the preservation of the environment
- 14. Disposition to reflect the commitment to integrity, credibility, and the rules of the profession
- 15. Ongoing commitment to self-development and transfer of knowledge and experience to others

General standards

Knowledge and understanding

The end of study the doctoral program graduates should be able to understand and know-how of both:

- a. Fundamentals and theories of modern knowledge in the area of specialization and related fields
- b. The basics and methodologies and ethics of scientific research and various tools
- c. Ethical and legal principles of professional practice in the area of specialization
- **d.** The basics and principles of quality in professional practice in the area of specialization
- **e.** Knowledge on the effects of exercise on the environment and professional environment and the development of methods and maintenance



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Mental skills

The end of the study the doctoral program graduates should be able to:

- a. Analyzing and evaluating information in the area of specialization and measuring them
- **b.** Specialized problem-solving based on the data available
- c. Conduct research studies add to the knowledge
- **d.** drafting papers
- e. Risk assessment in professional practices
- **f.** Planning for the development of performance in the area of specialization
- g. Professional decision-making in various professional contexts
- **h.** Innovation / Creativity
- i. dialogue and debate based on evidence and proof

Professional skills

The end of the study the doctoral program graduates should be able to:

- **a.** Master the basic professional skills and modern in the area of specialization
- **b.** Writing and evaluation of professional reports
- c. Assessment and development of methods and tools existing in the area of specialization
- **d.** The use of technological means to serve the professional practice
- **e.** Planning for the development of professional practice and the development of performance of others

General skills and transition

The end of the study the doctoral program graduates should be able to:

- **a.** Effective communication in its different forms
- **b.** Use of information technology to serve the development of professional practice
- **c.** Teach others and evaluate their performance
- **d.** Self-assessment and continuous learning
- e. Use different sources for the information and knowledge
- **f.** Work in a team and team leadership
- g. Scientific meetings management and the ability to manage time