

BSc in Physics Program Program Intended Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Explain the scientific principles and methodologies of physics and related scientific disciplines at the university level. (**Knowledge**)
2. Apply these scientific principles in conjunction with quantitative reasoning methods and experimental and information technology skills to analyze and solve practical problems. (**Execution**)
3. Evaluate information and make independent judgments through the application of scientific principles and reasoning methods. (**Judgment**)
4. Communicate effectively about physics to both lay and expert audiences, utilizing appropriate information and communication technology. (**Communication**)
5. Demonstrate self-direction in tackling and solving problems and act autonomously in planning and implementing tasks. (**Autonomy**)
6. Collaborate effectively in a team. (**Interpersonal skills and leadership**)
7. Conduct self-evaluation and continuously enrich themselves through lifelong learning. (**Self-reflection**)
8. Convey to lay audiences an appreciation of the value of science and the scientific method. (**Appreciation of science**)
9. Recognize and comply with scientific standards and ethical practice, and recognize the importance of being a responsible citizen and of ensuring a sustainable environment. (**Ethical practice**)
10. Use a global perspective in conjunction with scientific knowledge to address issues of importance in physics and society. (**International outlook**)

BSc in Physics (Applied Physics Option) Program Intended Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Explain the scientific principles and methodologies of physics and related scientific disciplines at the university level, with emphasis on optics and materials science. **(Knowledge)**
2. Apply these scientific principles in conjunction with quantitative reasoning methods and experimental and information technology skills to analyze and solve practical problems. **(Execution)**
3. Evaluate information and make independent judgments through the application of scientific principles and reasoning methods. **(Judgment)**
4. Communicate effectively about physics to both lay and expert audiences, utilizing appropriate information and communication technology. **(Communication)**
5. Demonstrate self-direction in tackling and solving problems and act autonomously in planning and implementing tasks. **(Autonomy)**
6. Collaborate effectively in a team. **(Interpersonal skills and leadership)**
7. Conduct self-evaluation and continuously enrich themselves through lifelong learning. **(Self-reflection)**
8. Convey to lay audiences an appreciation of the value of science and the scientific method. **(Appreciation of science)**
9. Recognize and comply with scientific standards and ethical practice, and recognize the importance of being a responsible citizen and of ensuring a sustainable environment. **(Ethical practice)**
10. Use a global perspective in conjunction with scientific knowledge to address issues of importance in physics and society. **(International outlook)**

BSc in Physics (Physics and Mathematics Option) Program Intended Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Explain the scientific principles and methodologies of physics and related scientific disciplines at the university level, with emphasis on mathematical skills. (**Knowledge**)
2. Apply these scientific principles in conjunction with quantitative reasoning methods and experimental and information technology skills to analyze and solve practical problems. (**Execution**)
3. Evaluate information and make independent judgments through the application of scientific principles and reasoning methods. (**Judgment**)
4. Communicate effectively about physics to both lay and expert audiences, utilizing appropriate information and communication technology. (**Communication**)
5. Demonstrate self-direction in tackling and solving problems and act autonomously in planning and implementing tasks. (**Autonomy**)
6. Collaborate effectively in a team. (**Interpersonal skills and leadership**)
7. Conduct self-evaluation and continuously enrich themselves through lifelong learning. (**Self-reflection**)
8. Convey to lay audiences an appreciation of the value of science and the scientific method. (**Appreciation of science**)
9. Recognize and comply with scientific standards and ethical practice, and recognize the importance of being a responsible citizen and of ensuring a sustainable environment. (**Ethical practice**)
10. Use a global perspective in conjunction with scientific knowledge to address issues of importance in physics and society. (**International outlook**)

BSc in Physics (Honors Physics Option) Program Intended Learning Outcomes

Upon successful completion of the program, students will be able to:

1. Explain the scientific principles and methodologies of physics and related scientific disciplines at the university level, with emphasis on advanced theoretical physics. **(Knowledge)**
2. Apply these scientific principles in conjunction with quantitative reasoning methods and experimental and information technology skills to analyze and solve practical problems. **(Execution)**
3. Evaluate information and make independent judgments through the application of scientific principles and reasoning methods. **(Judgment)**
4. Communicate effectively about physics to both lay and expert audiences, utilizing appropriate information and communication technology. **(Communication)**
5. Demonstrate self-direction in tackling and solving problems and act autonomously in planning and implementing tasks. **(Autonomy)**
6. Collaborate effectively in a team. **(Interpersonal skills and leadership)**
7. Conduct self-evaluation and continuously enrich themselves through lifelong learning. **(Self-reflection)**
8. Convey to lay audiences an appreciation of the value of science and the scientific method. **(Appreciation of science)**
9. Recognize and comply with scientific standards and ethical practice, and recognize the importance of being a responsible citizen and of ensuring a sustainable environment. **(Ethical practice)**
10. Use a global perspective in conjunction with scientific knowledge to address issues of importance in physics and society. **(International outlook)**