

School of Science Educational Goals

Endeavor to develop science competency

Educate our students to be scientifically competent with the potential to engage in activities demanding scientific thinking, analysis and task execution. Nurture our students to become scientists generating cutting edge knowledge for the betterment of mankind.

Commitment to the society

Educate our students to be scientifically competent in their future professions including research and development, education, manufacturing, logistics, business and finance, and to raise the overall scientific literacy of our general public during their undergraduate and working lives.

Intended learning outcome of science students

Upon graduation, students should:

1. Be able to apply scientific principles and reasoning methods to critically evaluate available information and make independent judgment. (judgment)
 2. Be able to work independently, and to collaborate effectively in team work and team building. (interpersonal skill and leadership)
 3. Be able to understand and explain the scientific principles in broad areas and to use of tools of one or more science disciplines at the college level. (knowledge)
 4. Be able to communicate effectively, both orally and in writing, about science to both lay and expert audiences, utilizing appropriate information and communication technology. (communication)
 5. Be able to conduct self-evaluation, and continuously enrich themselves through life-long learning.¹ (self reflection)
 6. Be able to apply scientific principles in conjunction with quantitative reasoning methods and experimental and IT skills to analyze, execute tasks and solve problems in daily life and at work. (execution)
 7. Be able to recognize the importance of complying with the ethics of science, of being a responsible citizen, and of ensuring a sustainable environment.¹ (ethical practice)
 8. Be able to explain science to lay audiences and arouse their interest in the beauty, logic, and precision of science.¹ (appreciation of science)
1. They can be monitored through self-claiming reports and serve as the guiding philosophy underlying the science education we aim to provide.

Intended Learning Outcomes of BSc (Mathematics) programs

Upon graduation, a BSc(Mathematics) student should:

1. Be able to explain the core ideas and the techniques of mathematics at the college level;
2. Be able to apply rigorous, analytic, highly numerate approach to analyze, execute tasks and solve problems in daily life and at work;
- 3P. (*for Pure Mathematics program*) Be able to recognize the power of abstraction and generalization, and to carry out investigative mathematical work with independent judgment;
- 3A. (*for Applied Mathematics program*) Be able to setup mathematical models of real world problems and obtain solutions in structured and analytical approaches with independent judgment;
- 3S. (*for Statistics program*) Be able to carry out objective analysis and prediction of quantitative information with independent judgment;
- 3E. (*for Mathematics and IT Education program*) Be able to demonstrate a systematic knowledge of learning processes and a professional attitude in classroom teaching of mathematics and IT;
4. Be able to communicate effectively about mathematics to both lay and expert audiences utilizing appropriate information and communication technology;
5. Be able to work independently, and to collaborate effectively in team work and team building;
6. Be able to conduct self-evaluation, and continuously enrich themselves through lifelong learning;
7. Be able to communicate to lay audiences and arouse their interest in the beauty and precision of mathematical arguments and science;
8. Be able to recognize the importance of compliance with the ethics of science and being a responsible citizen towards their community and a sustainable environment.