

## **Learning Outcomes**

Aan / 10 April 2017

## APOTHECARY EDUCATION UNDERGRADUATE DEGREE PROGRAMME, FACULTY OF PHARMACY, UNAIR

## LEARNING OUTCOMES (LO) OF GRADUATES

- LO 1 Explain the basic and applied principles of the basic science, basic medical science, and basic social science to support the pharmaceutical science
- LO 2 Explain the basic principles pharmaceutical science and technology, specifically those relevant to the development of new pharmaceutical products, from discovery to design to marketing.
- LO 3 Explain the concept of quality control of medicinal substances and pharmaceutical preparations (drugs, traditional medicines, cosmetics), food. and beverages in accordance with set scientific principles and standards.
- LO 4 Explain the basic principles and creation techniques, as well as the use and service, of special drug groups.
- LO 5 Explain the basic principles and techniques of manufacture of medicinal raw materials, as well as the relationship between changes in structures with biological activity.
- LO 6 Apply the science and/or technology in the field of pharmacy through scientific reasoning based on logical, critical, systematic, and innovative thinking.
- LO 7 Able to make pharmaceutical preparations (drugs, traditional medicines, and cosmetics) covering formulation, manufacture, and quality assurance aspects of pharmaceutical preparations, on the basis of pharmaceutical science and technology.

- LO 8 Be able to examine and assess the scientific validity of drug-related information with considerations relating to the legal, ethical, professional, sociocultural, and economic aspects while being oriented to the interest of the patients
- LO 9 Perform a review of scientific publications related to the field of pharmacy
- LO10 Conduct research as the application of scientific methods and attitudes and be able to communicate and account for the results according to scientific principles.
- LO11 Publish results of their final project or design work/design/formula which satisfies scientific procedures and can be accessed by the academic community
- LO12 Be able to participate in preventive and promotive efforts to improve the quality of public health.
- LO13 Provide information and perform communication of medicines and other pharmaceutical supplies to patients, colleagues, the public, and fellow health professionals in an objective, scientific, and responsible manner regarding rational drug therapy.
- LO14 Communicate ideas and information regarding the pharmaceutical field effectively through various forms of media to the academic community
- LO15 Explain government laws and regulations concerning pharmacy and the pharmaceutical profession code of ethics correctly and consistently.
- LO16 Take right decisions based on the analysis of the supervision and evaluation of the pharmaceutical work
- LO17 Manage self-learning according to scienctific and technological developments in the field of pharmacy