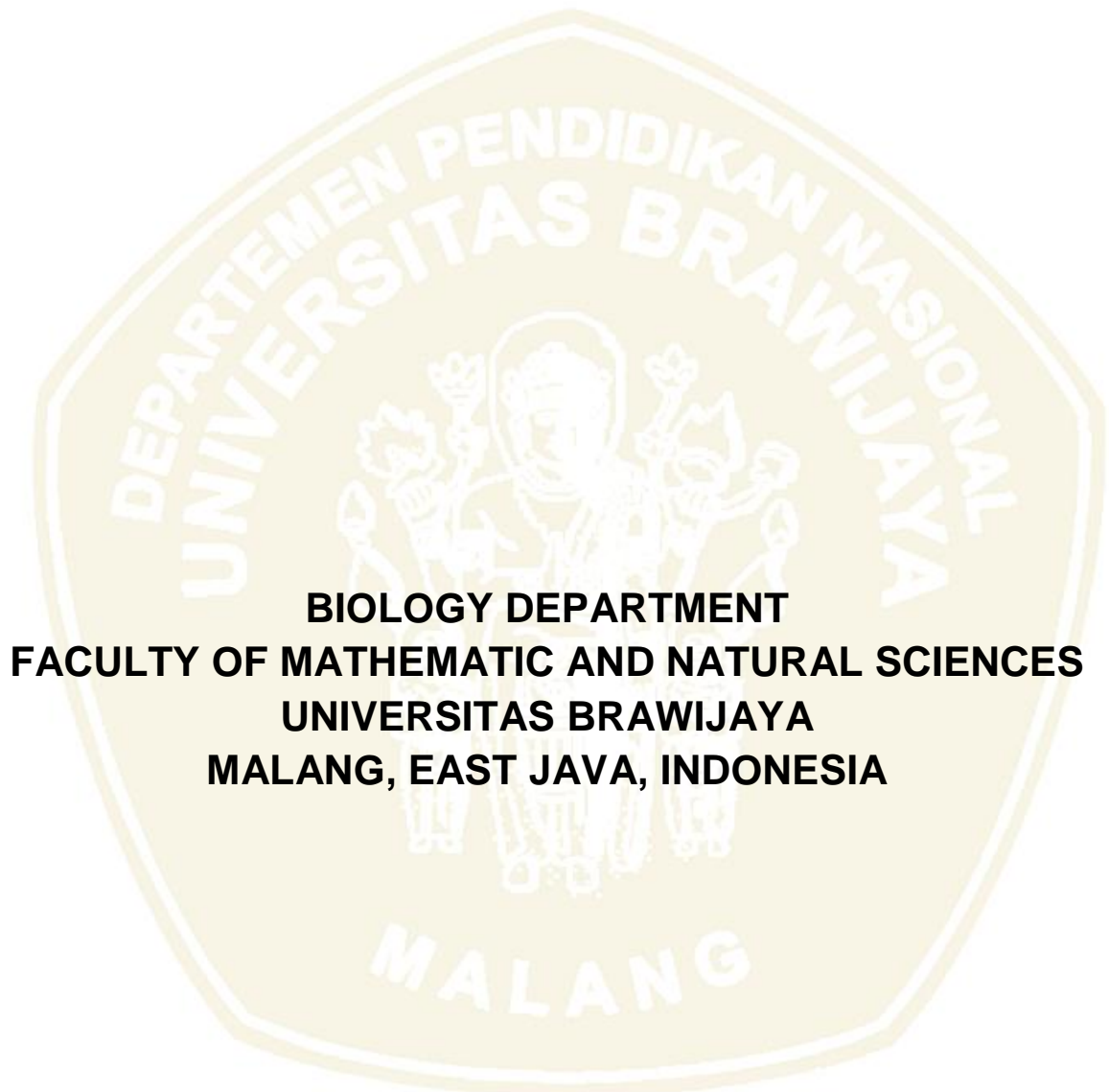


# **PROGRAM SPECIFICATION**

## **BIOLOGY STUDY PROGRAM**



**BIOLOGY DEPARTMENT  
FACULTY OF MATHEMATIC AND NATURAL SCIENCES  
UNIVERSITAS BRAWIJAYA  
MALANG, EAST JAVA, INDONESIA**

**Malang, June 2014**

## PROGRAM SPECIFICATION OF BIOLOGY STUDY PROGRAM

The program specification for the BSP is written in the university prospectus, student handbook and website. The general information stated in the program specification is as follows.

- Name of Study Program : Biology Study Program (Program Studi S-1 Biologi)  
Institutional Homebase : Department Biology, Faculty of Math. And Natural Sciences  
Address : Jalan Veteran, Malang, Jawa Timur (East Java), Indonesia 65145  
Contact : Phone/Fax.: +62 341 575841; email: [biology@ub.ac.id](mailto:biology@ub.ac.id)  
Website: <http://www.biologi.ub.ac.id>  
Year of Establishment : 1987  
Accreditation Status : A degree by National Accreditation Board of Higher Education (BAN-PT)  
Quality Management System : ISO 9001:2008 (LRQA)  
Degree Awarded : Bachelor Degree in Science (Sarjana Sains)  
Study Period : 4 (four) years (8 semesters)  
Minimum credits : 144 credits  
Goals of the Program :
1. To produce qualified graduates of biology, to be pious to God Almighty and entrepreneurial, so that becoming a professional worker capable to compete at international level.
  2. To develop the concept of modern biology to promote sustainable development.
  3. To have the ability to empower the community through the application of modern biological innovations.

Benchmark and references : some top universities in ASIA and Europe: Institute Technology of Bandung (ITB), University of Gajah Mada (UGM), Hiroshima University-Japan, and Nottingham University-UK

Program Outcomes :

**Knowledge literacy.** Understanding on the principles of biology; biological resources; environmental conservation; application of biological concept to explore and utilize biological resources; biotechnology; standard methods for analysis and synthesis of biological phenomenon ranging from general to a particular field; being able to operate biological software and necessary instruments.

**Work Skill (ability to work).** The graduates being able to provide the alternative solutions for solving the problem of science and technology, especially management and uses of natural resources in a narrow scope through application of biological science and entrepreneur practice. Therefore, it can be used to take appropriate decision for the community, state and private institutions.

**Attitude and Personal Value.** The formation of young scientist character who has bio-entrepreneurship spirit, good attitude, high performance, and passion for success.

**Managerial Ability.** The graduates being able to make right decisions based on the data and information in solving human problems that aware to biodiversity conservation and being able to provide guidance in a team or community in carrying out the work responsibly to achieve sustainable organizational goals.

Generally, BSP has similarity specification with other existing biological courses at various universities both at national and International. This is because the BSP standardized through benchmarked and referenced to some top universities in ASIA and Europe, i.e. Institute Technology Bandung (ITB), the University of Gajah Mada (UGM), Hiroshima University-Japan, and Nottingham University-UK. However, the BSP has advantages over biological programs compared to other colleges because BSP focusing on developing new concept based on modern biology to solve problems and conserve the local biodiversity.

Mastery of the modern biology concept to support the development of applied sciences and to resolve local problems that aware to biodiversity conservation is competencies of Biology graduate that it is mandated by DIKTI. Therefore, the BSP designed curriculum of the undergraduate program to meet national requirements and educational Standard accordance with the BAN-PT. BSP specification always socialized to new students and placed in the biology department website so that all stakeholders can freely access it.

The Specification accompanied with the quality of human resources, teaching, and research activity lead BPS accredited with score 'A' by BAN-PT and certified by ISO 9001:2008. Since 2009, BSP-UB has been awarded Annual Quality Award from the UB (UBAQA). It was implicated in increasing The number of candidate of student interest to BSP. Moreover, BSP designed the graduates have possession on an essential skill of Modern Biology, understand conservation concept and life skill. Essential skill of biology covers understanding of modern biology such as Cellular and Molecular Biology, Environmental Biology, function and structure of regulation, Genetics, Taxonomy and Evolution. Life skills that should be owned by graduates are a great personality, confidence, team work ability with many differences (culture, religion, language, etc.), oral and written communication, hard-work in pressure, honesty, discipline, independence, creativity and initiative. Those characters become bio-entrepreneurship competencies that are taught in every learning process and should be built as habit continuously. Thus, Biology graduates have outstanding knowledge and mental toughness that can be used in the labor market.

Biology Undergraduate curriculum is an educational study program with eight semesters in maximum or four-year study. It focuses on mastering and applying development of science. It is different from other professional academic programs that only focus on a particular competency given to graduates. Analytical thinking is a fundamental concept of Modern Biology that provides BSP graduates with high adaptability to the labor market, life diversity, competencies or changing era.

Since effectiveness of the learning process determines most graduates' quality, academic manual or curriculum should be designed based on 'paradigm' that learning starts from basic concept comprehension and simplicity turns to complexity of multi-discipline sciences synergy. Competencies that are developed through this curriculum structure are described on taught materials that are categorized in courses and given in stages of every semester. At the end of training, the curriculum is expected to be able to produce high potential graduates whose excellent competency in the labor market and high social skill in society.