

Criteria for Admission

Admission decisions are made after a full review of the materials in the application. Programs consider previous records, test scores as well as recommendations and look for clear evidence of the ability to do advanced research work of the highest quality.

Please see our brochure “Research @ BIOTEC” for most current research topics available and indicate your chosen topics (1-2 topics) during an interview.

Scholarships

- Partial tuition scholarship (Department of Biotechnology)
- Young Scientist Strengthening Scholarship (Faculty of Science)
- Scholarships for Foreign Students (Faculty of Science)
- Teaching Assistantships & Research Assistantships (Faculty of Science)
- The 60th Year Supreme Reign of His Majesty King BhumibolAdulyadej
- Faculty of Graduate Studies Scholarships for Partial Thesis
- Grant to support graduate student in academic presentation (Faculty of Graduate Studies)
- Graduate Studies of MahidolUniversity Alumni Association Scholarship
- Royal Golden Jubilee Ph.D. program (RGJ-TRF)
- Research and Researcher for Industry (RRI-TRF)
- Thailand Graduate Institute of Science and Technology grants (TGIST-NSTDA)
- Scholarship for students in Industrial & Bioprocess Engineering (IB) Module (Siam Bioscience Co., Ltd.)

Academic & Industrial Partners

- Center of Shrimp Molecular Biology and Biotechnology
- Cassava Molecular Biotechnology Consortium
- Center for Protein Structure and Functions
- Chulabhorn Research Institute (CRI)
- Chiba University, Japan
- Nara Institute of Science and Technology, Japan
- Osaka University, Japan
- Tokyo Institute of Technology, Japan
- RIKEN, Japan
- Cornell University, USA
- Pavia University, USA
- University of New York at Albany, USA
- University of Wisconsin, USA
- Betagro
- BioNet-Asia Co., Ltd.
- KEEEN Co., Ltd.
- PTT Public Company Ltd. and much more.

Contact Information:

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Graduate Program

Biotechnology Mahidol
Quality and Success

www.sc.mahidol.ac.th/scbt/

Overview

Department of Biotechnology at Mahidol University is focusing on basic knowledge in bioscience and its practical application in industry and health care. Started in 1982, many students have acquired their B.Sc., M.Sc. and Ph.D. degree and participate now as employees of the Royal Thai Government and private industry in the development of bioprocessing and quality control in Thai agro-industry.

Our teaching program offers students all necessary basic science and applied science courses in order to become multidisciplinary bioscientists. The program also includes industrial training and research projects in various biotechnology fields.

In addition to its academic training programs, the Department of Biotechnology acts as an important bio-industrial and bio-medical research center to apply recent scientific progress for the Thai community. We offer a range of consulting and training services to government and industry. Seminars, workshops and conferences are arranged to assist Thai and regional scientists to improve their scientific skills, to share knowledge as well as to make connections required for future corporation.

Our present and future goal is to carry out top-class research and provide world-class training to make Thailand collaborate successfully in the international field of biotechnology.

2014 Academic Schedule

Activity	Round 1	Round 2
Submit application	1Aug-15Dec2013	1Aug2013-30Apr2014
Written examination	25Jan2014	24May2014
Call for an interview	18Feb2014	12Jun2014
Interview	19Feb-21Mar2014	13-20Jun2014
Result announcement	4Apr2014	4July2014
Student orientation	4-8Apr2014	4-7July2014
1 st Semester	11Aug-4Dec2014	

Graduate Programs & Requirements

- Master of Science (M.Sc.) in Biotechnology (International Program)
 - Program A1 (Dissertation)
 - GPA \geq 3.0
 - English proficiency score (MU-test \geq 45)
 - Experience working in research institute or industry related to biotechnology \geq 1 year
 - Program A2 (Coursework & Dissertation)
 - GPA \geq 2.5
 - English proficiency score (MU-test \geq 45)
- Doctor of Philosophy (Ph.D.) in Biotechnology (International Program)
 - GPA \geq 3.5
 - English proficiency score (TOEFL-ITP \geq 500)
- Double Doctor of Philosophy (Ph.D.) in Biotechnology – Environmental Horticulture (Mahidol University & Chiba University)

Courses Offered

Cell & Molecular Biology
Concepts of Molecular Bioscience
Generic Skills in Scientific Research
Biostatistics
Advanced Industrial Biotechnology
Recombinant DNA Technology
Gene Regulation
Advanced Animal Cell Technology
Biology & Pathology of Shrimp
Fermentation Technology
Bioprocess Engineering for Bio-renewable Resources
Downstream Processing in Biotechnology
Advanced Bioprocess Engineering
Food Science & Technology
Advanced Food Technology
Special Topics in Biotechnology

Research Area

Agricultural Biotechnology (AB)

- Molecular genetics related to rice, rubber tree, cassava, oil palm, and medicinal plants
- Plant tissue culture for crop improvements
- Physiology & molecular biology of plant under environmental stresses
- Plant-based protein expression
- Hydroponic technology
- Viral pathogens in shrimp

Food Biotechnology (FB)

- Production of starter culture for fermented food
- Microbiology & safety of fermented food
- Quality system in food industry
- Value-added functional food products
- Flavor in fermented food
- Deterioration and shelf-life prediction in fermented food
- Biopolymer-based antimicrobial food packaging

Industrial & Bioprocess Engineering (IB)

- Recombinant protein production
- Chemical fluorescent sensor for biomonitoring
- Starch & hydrocolloids in food products
- Microbial protease for silk degumming process
- Fermentation technology
- Whole-cell biocatalysis
- Bioremediation
- Bioethanol

Molecular Biotechnology (MB)

- Production & molecular analysis of fungal and bacterial enzymes
- Stress tolerance of thermotolerant yeast
- Production of recombinant vaccine by yeast
- Molecular biology of transposable elements from insect genomes
- Bioactive compounds
- Bacterial stress response
- Bacillus and related bacteria as probiotic
- Animal cell culture
- Stem cells