



Program Level Bachelor Graduate Diploma
 Master Higher Graduate Diploma Doctor
 Bachelor of Science Program in Biomedical Science (International Program)

Faculty of Science
 Department of Pathobiology

MU Degree Profile

Bachelor's degree Program	
1. Program Title (In Thai) หลักสูตรวิทยาศาสตรบัณฑิต สาขาวิชาวิทยาศาสตร์ชีวการแพทย์ (หลักสูตรนานาชาติ) (In English) Bachelor of Science Program in Biomedical Science (International Program)	
2. Degree Offered (In Thai) วิทยาศาสตรบัณฑิต (วิทยาศาสตร์ชีวการแพทย์) (In English) Bachelor of Science (Biomedical Science)	
General Information of the Program	
Type of program	Bachelor's Degree (International Program), Academic Program
Number of Credits	Plan A – no less than 121 credits from Mahidol University Plan B – no less than 71 credits from Mahidol University and no less than 240 credits from the University of Sussex
Study Duration / Program Cycle	4-Year Program
Program's Status and Program Schedule	1. Revised Program (2024) 2. Program start: Semester 1 Academic Year 2024
Degree Granting	Plan A – one degree (B.Sc. in Biomedical Science offered by Mahidol University) Plan B – double degree (B.Sc. in Biomedical Science offered by Mahidol University and B.Sc. in Biomedical Science offered by the University of Sussex)
Degree-granting Institutions (MOU with other institutions)	Mahidol University, Thailand The University of Sussex, United Kingdom
Accreditation Institution	—
Specific Information of the Program	
Goals & Objectives	Goals: To produce competent biomedical science graduates who are innovative, ethical, professional, well-equipped with 21 st century and communication skills, presented with Mahidol graduate attributes (T-Shaped, Globally Talented, Socially Contributing, Entrepreneurially Minded), and ready for a career globally or for further study and be a part of achieving the Sustainable Development Goals (SDGs). The program is considering the incorporation of SDG4 into the considerations in program revision. SDG4 focuses on quality education, aiming to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.



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Specific Information of the Program	
Goals & Objectives (cont.)	<p>Objectives:</p> <p>To produce graduates who have the characteristics, knowledge, and skills as follows:</p> <ol style="list-style-type: none"> 1. apply knowledge in biomedical science and related fields to address health-related needs and assist in the understanding of human diseases and associated problems 2. demonstrate laboratory skills in the safe and proper use of instruments and reagents in accordance with chemical and laboratory safety guidelines and international standards 3. perform a research project in biomedical science or related fields following the international research process 4. demonstrate proficiency in effective teamwork through a multifaceted approach 5. effectively communicate ideas and findings in biomedical science and related fields to the scientific community and the general public through clear and concise written and verbal communication in a manner 6. Show a strong sense of ethical responsibility and professional conduct in biomedical research 7. foster a mindset of intellectual curiosity, adaptability, and ongoing professional development
Distinctive Features	<ol style="list-style-type: none"> 1. The international bachelor program in biomedical science of Thailand with a double degree opportunity with the University of Sussex, United Kingdom 2. Students have opportunities to learn about business practices and are allowed to pursue a Master's degree in Management by the College of Management, Mahidol University (CMMU). They can earn bachelor's and master's degree in 5 years.
Educational System	Semester System
Graduates' advancement	
Career opportunities	<ol style="list-style-type: none"> 1. Academia sector: scientist, research assistant, teaching assistant, scholar 2. Industrial sector: entrepreneurial mindset, product specialist, product seller, analyst 3. Self-employed
Further fields of study	<ol style="list-style-type: none"> 1. Graduate programs in biomedical science and related fields including anatomy and structural biology, biochemistry, microbiology and immunology, pathobiology, pharmacology, physiology, and other programs in life sciences or graduate programs in management at the College of Management,



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	<p>Mahidol University (CMMU)</p> <p>2. Individuals may opt to pursue further education in diverse professional Bachelor's degree programs within the fields of medicine or nursing, as these programs necessitate graduation with a bachelor's degree. Certain credits may be transferable, allowing for exemptions from specific courses. Graduates also possess a robust foundation in medical science, enhancing their readiness to pursue professional degrees in medicine or health science.</p>
Philosophy in Program Administration	
Educational Philosophy	<p>Our program focuses on educating the learners through learning-centered education, outcome-based education, and constructivism. Learners are capable of self-development and connecting new information or concepts with prior knowledge.</p>
Strategy/teaching guidelines	<p>The program is aware of differences in students' backgrounds, strengths and weaknesses, interests, and learning styles. Therefore, a range of teaching styles are promoted through diverse learning activities according to the learning outcomes, including</p> <ul style="list-style-type: none"> • active learning strategies by putting students at the center of the learning activity and requiring students to become active participants in their learning process • encourage initiative strategies by allowing students to participate in the class discussions and exercises that support the initiative • technology for learning: a virtual field trip, VDO on demand, interactive VDO, or podcasts to improve student engagement • problem-based/project-based learning strategies in order to allow students engaged in individual or group work to investigate and find the proper solution by themselves as well as to improve students' creativity, critical thinking and analysis <p>The teaching and learning management is consistent with constructivism by teaching from the basic to advanced, supporting self-directed learning by linking new knowledge with old knowledge and creating an environment that promotes learner learning.</p>



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Philosophy in Program Administration	
Strategy/student's evaluation guidelines	<p>The assessments and evaluations align with the desired learning outcomes and the teaching strategies.</p> <ul style="list-style-type: none"> ● Assessment tools must be valid, reliable, and fair. ● Authentic assessment evaluates the student through contexts, scenarios, and situations beyond the classroom. Formative assessment is ungraded and used to monitor the student progress in order to help students recognize their weakness and improve their performance. Formative assessments include quizzes, strategic questions, and assessment reflection. ● Summative assessments include multiple-choice questions, written and oral examinations, individual or group activities, oral and poster presentations, practical tests, and laboratory reports. ● The rubrics based on the learning outcomes of each subject are utilized for achievement of the learning objectives. ● Criterion-referenced assessments are utilized to assess the accomplishments of students.
Competences Provided to the Students	
Generic Competences	<ol style="list-style-type: none"> 1. Ethics: be able to demonstrate moral and ethical behavior and be responsible for their own actions, including awareness of plagiarism 2. Critical thinking and problem-solving skills: be able to make judgment clearly and rationally by processing, engaging, and evaluating information through reflective and independent thinking 3. Information, media, and technology skills: be able to choose the appropriate information technology for searching of information and data, create multimedia presentations, and be able to analyze the reliability of data from various sources 4. Creativity and innovation: be able to conceive, integrate, or advance ideas and research through insertion, implementation, or development 5. Communication: be able to transfer knowledge using effective English in both written and oral forms depending on target audiences and academic purposes 6. Collaboration: be able to develop effective relationships with individuals towards achieving common goals



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	<p>7. Responsibility: be able to generate results by acting in a focused way and within the deadlines</p> <p>8. Self-directed learning: be able to detect gaps in own</p>
Subject-specific Competences	<p>1. Explain knowledge in biomedical science including anatomy and structural biology, biochemistry, microbiology and immunology, pathology, pharmacology, and physiology</p> <p>2. Apply knowledge and laboratory skills in biomedical science and related science to solve problems, perform laboratory experiments or a research project</p> <p>3. Behave with intellectual honesty, research ethics, and code of conduct</p>
Graduates' Learning Outcomes	
<p>At the end of the program, successful students will be able to:</p> <p>PLO1 Apply biomedical science and current scientific data, logically and systematically to explain health-related issues with professional ethics awareness</p> <p>PLO2 Carry out laboratory-based experiments in biomedical science or related fields in compliance with international laboratory standards</p> <p>PLO3 Produce an independent research project to solve the specific research problems in biomedical science or related fields with scientific standards</p> <p>PLO4 Work with others to achieve team goals based on the roles and responsibilities of a biomedical scientist</p> <p>PLO5 Effectively communicate the concepts and information of biomedical science and related fields to scientific community in English using both written and oral forms and up-to-date information technologies</p> <p>PLO6 Develop their academic potential in biomedical science to make themselves competent (a combination of knowledge, skills, and attitudes) and responsible global citizens capable of adapting to changing situations</p>	