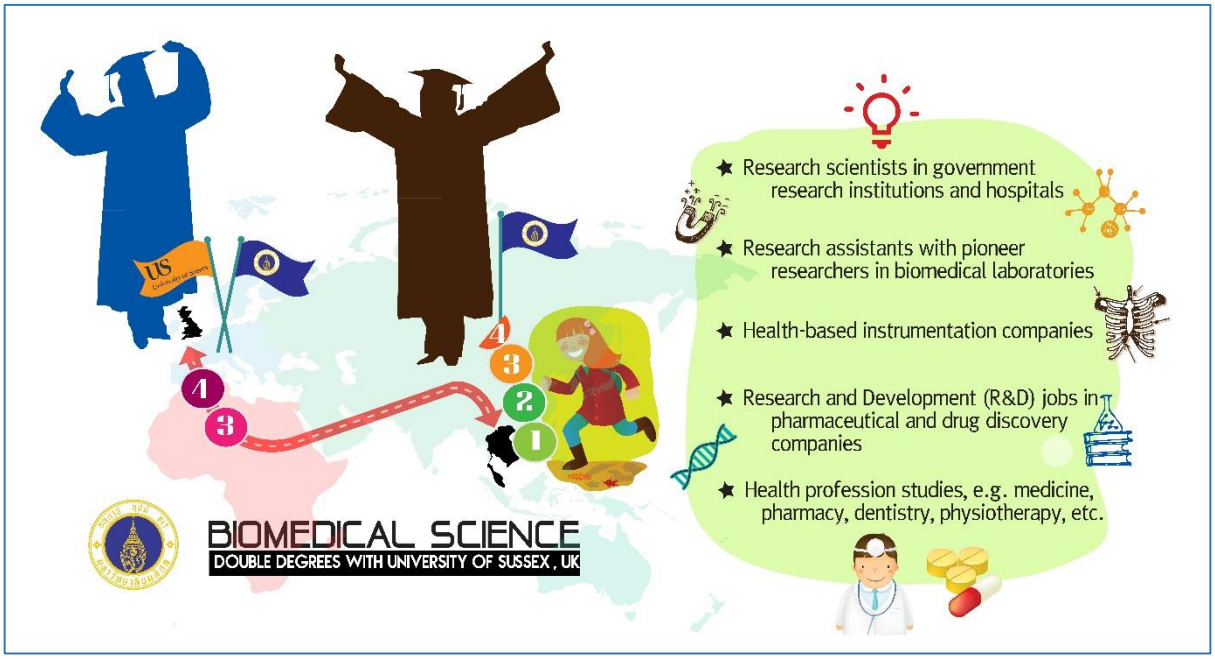
BIOMEDICAL SCIENCE

Double degrees with University of Sussex, UK

Faculty of Science (International Program), Mahidol University (SIM) has developed Dual Degree Programs in cooperation with University of Sussex, UK. Students will develop diversity of thought and international competencies. The programs aim at preparing students for profession studies, i.e. medicine, dentist, pharmacy, physician assistant, or graduate school, or direct route into a healthcare career.

Students of the Dual Degree Program receive both B.Sc. degrees in Biomedical Science from Mahidol University and University of Sussex, UK. The program requires the attendance of two academic years abroad.



CURRICULUM

The curriculum consists of a life sciences core and a broad range of course options. Concentrations are available in which the student, in consultation with an academic advisor, may select a series of required and elective courses.

TOTAL NUMBER OF REQUIRED CREDITS

Plan A	133 credits (Faculty of Science, Mahidol University)
Plan B	82 credits (Faculty of Science, Mahidol University)
	240 credits (University of Sussex, UK)

COURSES IN THE CURRICULUM

A. Generation education	**30 credits**	
[1] Science & Mathematics	18 credits	
ENGE 105	Integrating Health and Environment	3 (3-0-6)
SCBI 163	Essential Biology	2 (2-0-4)
SCCH 161	General Chemistry	3 (3-0-6)
SCCH 172	Organic Chemistry	3 (3-0-6)
SCPY 163	Basic Physics	2 (2-0-4)
SCMA 161	Technology in Daily Life	3 (3-0-6)
SCID 201	Learning Techniques	1 (1-0-2)
SCID 202	Basic Information Literacy	1 (1-0-2)
[2] Social Science and Humanity	**4 credits***	
PRPR 101	Population and Development	2 (2-0-4)
PRPR 102	Regional Studies	2 (2-0-4)
SHSS 103	Man and Society	2 (2-0-4)
SHSS 125	Principles of Political Science and Thai Politics	2 (2-0-4)
	*Choose only 4 credits	
[3] English	**8 credits**	
LEAN 180	English of Academic Purpose 1	2 (1-2-3)
LEAN 181	English for Academic Purpose 2	2 (1-2-3)
LEAN 280	Science Friction and Society	2 (2-0-4)*
LEAN 282	The Science of Speech Sounds	2 (2-0-4)*
LEAN 283	Academic Presentation	2 (2-0-4)
	*Choose only 2 credits	
B. Special education	**95 credits**	
[1] Science and Mathematics	15 credits	
SCCH 189	Chemistry Laboratory	1 (0-3-1)
SCMA 174	Calculus and Systems of Ordinary Differential Equations	3 (3-0-6)
SCMA 172	Statistics for Medical Science	3 (3-0-6)
SCPY 160	General Physics Laboratory	1 (0-3-1)
SCPY 164	Physics for Medical Science	3 (3-0-6)
SCBI 192	Biology Laboratory	1 (0-3-1)
SCID 102	Cell and Molecular Biology	3 (3-0-6)

[2] Medical Science	80 credits	
SCBM 251	Cell and Molecular Medicine	3 (3-0-6)
SCBM 211	Human Structure 1	3 (1-4-4)
SCBM 213	Human Embryology	2 (2-0-4)
SCBM 281	Biochemistry	3 (3-0-6)
SCBM 282	Laboratory in Biochemistry	1 (0-3-2)
SCBM 221	Physiology for Medical Sciences 1	3 (3-0-6)
SCBM 212	Human Structure 2	3 (1-4-4)
SCBM 214	Structures of Cell and Tissue	3 (2-3-5)
SCBM 215	Medical Neuroscience	4 (3-2-7)
SCBM 222	Physiology for Medical Sciences 2	3 (2-2-5)
SCBM 223	Physiology for Medical Sciences 3	3 (3-0-6)
SCBM 231	Fundamental Immunology	1 (1-0-2)
SCBM 232	Fundamental Microbiology	2 (2-0-4)
SCBM 498	Seminar in Biomedical Sciences	1 (1-0-2)
SCID 301	Systems Ecology and Disease Emergence	3 (3-0-6)
SCBM 331	Medical Bacteriology	2 (2-0-4)
SCBM 332	Medical Myology and Parasitology	2 (1-3-4)
SCBM 333	Medical Virology	2 (2-0-4)
SCBM 334	Human Immune Response	2 (1-3-4)
SCBM 321	Medical Genetics	2 (2-0-4)
SCID 302	Gene Technology	1 (0-2-1)
SCBM 341	General Pathology	2 (1-2-3)
SCBM 342	Systemic Pathology	4 (2-2-6)
SCBM 343	Clinical Pathology	2 (1-2-3)
SCBM 497	Scientific Writing	2 (2-0-4)
SCBM 451	Principles of Therapeutic Agents	2 (2-0-4)
SCBM 452	Pharmacology 1	3 (3-0-6)
SCMB 453	Pharmacology 2	3 (3-0-6)
SCBM 499	Senior Project	4 (0-4-0)
Module A	**MOLECULAR BIOMEDICAL RESEARCH**	
SCID 306	Cell Culture Techniques	2 (0-2-1)
SCID 307	Separation Techniques	2 (0-2-1)

SCBM 311	Mouse as a Model Organism for Diseases	1 (1-0-2)
SCID 308	Application of Microscopy	2 (1-2-3)
SCBM 499	Senior Project *Continuing course (2 semesters)	2 (0-2-0)*
Module B	**DISEASES AND THEIR CONTROLS**	
SCBM 344	Cellular and Molecular Pathology	2 (2-0-4)
SCID 306	Animal Cell Culture Techniques	2 (0-2-1)
SCBM 345	Cancer Biology	1 (1-0-2)
SCBM 346	Tropical Infectious Diseases and Controls	2 (2-0-4)
SCBM 499	Senior Project *Continuing course (2 semesters)	2 (0-2-0)*
Module C	**REGENERATIVE SCIENCE AND ANTI-AGING**	
SCBM 301	Tissue Regenerative Medicine	1 (1-0-3)
SCBM 302	Regenerative Neurobiology	2 (2-0-4)
SCBM 303	Aging Neurobiology of Central Nervous System	2 (2-0-4)
SCBM 304	Biological Science of Aging	2 (2-0-4)
SCBM 499	Senior Project *Continuing course (2 semesters)	2 (0-2-0)*

C. Free elective **8 credits***

[1] Select from the free elective courses offered by the Faculty.

SCID 203	Laboratory Exploration	1 (1-0-2)
SCID 303	Bioinformatics	2 (2-0-4)
SCID 304	Animal Experimentation	1 (0-2-1)
SCID 305	Generic Skills in Science Research	1 (1-0-2)

[2] Select from other curriculum offered by other faculties in Mahidol University

[3] Select courses offered by other Thai or foreign university under collaborative agreement with Mahidol University.

*Choose only 3 credits

D. Courses offered by the University of Sussex (only Plan B)

Module title	**Credits**
Cell Regulation and Cancer	15