PROSPECTUS 2022

SCHOOL OF BIORESOURCES AND TECHNOLOGY

King Mongkut's University of Technology Thonburi

Content **page**

Vision

We have committed to being a leading organization that creates workforces, research, and innovation to drive bio-based economic growth and sustainable development.

Mission

1. Create high-quality bio-based workforces of all ages.

2. Produces valuable research and innovation.

3. Provides academic and scientific services for sustainable development.

BACKGROUND

SBT founded in 1993 in response to the country's transition from a structurally agriculturally-based to an industrially-oriented economy, the school's aim is to produce outstanding and dedicated graduates who are able to conduct research and tackle challenging questions arising from this transition. The school consists of five divisions that address different aspects to these problems such as agricultural-waste utilization and management, manufacturing of value-added agricultural products by means of biotechnology and production of high-value compounds from microbes. We are also a center for basic and applied research on biomolecules, including starch, lipids and oil, proteins, fragrance and flavors.

We address questions to improve overall productivity and quality of agricultural products and logistics. With this, we are pursuing our goal to ensure effective and sustainable management of Thailand's natural bio-resources (including its wild biodiversity) and environment. At present, the school offers advanced courses in Master's and Doctoral degrees in Biotechnology, Biochemical Technology, Postharvest Technology and Natural Resources Management. Also in response to the importance of multi-disciplinary studies, we, in close collaboration with the Department of Information Technology have launched the first in Thailand, Master's degree program in Bioinformatics and Systems Biology in 2003. At present (in 2016), the School offers Doctoral in Bioinformatics and Systems Biology.

Leading Research and Innovation

SBT is a pioneer in the field of Bioresources and Technology in Thailand. Our R&D programs offer advanced training in the areas of Biotechnology, Postharvest Technology, Biochemical Technology Natural Resource Management and Bioinformatics and Systems Biology with special focus on food, feed, fuel and (bio-) pharmaceutics. We have developed and transferred new technology to many industrial partners. Many servicescenters are located on our campus, including the Pilot Plants Development and Training Institute (PDTI) and National Biopharmaceutical Facility (NBF), the Excellent Center for Waste Water Utilization and Management (ECoWaste). In 2010, KMUTT was recognized by the Commission of Higher Education, Thailand as one of the nine research universities and, SBT is proud of its contribution to this success.

Promising people in the house

SBT is also a home to several globally recognized faculty members and researchers. Over the years, we have produced a number of qualified graduates, and have published over 500 national and international peer-reviewed papers and filed over 20 patents since our founding. Apart from academic responsibility, it is SBT commitment to serve the local community and to contribute to solve the country's urgent problems.

Innovative study program

Our unique graduate programs are multi-disciplinary, covering a wide range of research interests. Intensive research is conducted in fully equipped laboratories as well as in real workplace settings. We provide students the opportunity to gain career-broadening experiences while working with the industry/community and through training overseas.

Scholarship opportunities

SBT attracts highly qualified local as well as international students each year. We guarantee scholarships to qualified new students upon admission.

Learning and living in harmony

This campus established in 2000, is located in a suburb Bangkhunthian seacoast not far from the downtown of vibrant capital city of Bangkok. Its location is a well-known destination for seafood lovers and other attractions. Bangkhunthian campus is also a green, eco-friendly learning environment. To ensure healthy learning and living, many services such as university housing, high speed internet, transportation, sports complex, health care center and several small restaurants are available on campus.

BOARD OF DIRECTOR AND CHAIRMAN

Position	Name-Surname	E-mail	Telephone No.
Board of Director			
Dean	Assoc. Prof.Dr.Varit Srilaong	varit.sri@kmutt.ac.th	0-2470-7726
Associate Dean for Administration	Assoc .Prof.Dr.Kornkanok Aryusuk	kornkanok.ary@kmutt.ac.th	0-2470-7758
Associate Dean for Academic Affairs	Asst.Prof.Dr.Sudarut Tripetchkul	sudarut.tri@kmutt.ac.th	0-2470-7556
Associate Dean for Research	Assoc.Prof.Dr. Pawinee Chaiprasert	pawinee.cha@kmutt.ac.th	0-24707525
Associate Dean for Quality Assurance	Asst. Prof. Dr. Kanokwan Poomputsa	kanokwan.poo@kmutt.ac.th	0-2470-7500
Chairman			
Biotechnology (BIT)	Dr.Saengchai Akeprathumchai	saengchai.ake@kmutt.ac.th	0-2470-7557
Biochemistry Technology (BCT)	Assoc.Prof.Dr. Nitnipa Soontorngun	nitnipa.soo@kmutt.ac.th	0-2470-7753
Postharvest Technology (PHT)	Assoc. Prof. Dr.Apiradee Uthairatanakij	apiradee.uth@kmutt.ac.th	0-2470-7724
Natural Resource Management and Sustainability (NRM)	Dr. Lakha Salaipeth	lakha.sal@kmutt.ac.th	0-2470-7558
Bioinformatics and Systems Biology (BIF)	Asst. Prof. Dr. Saowalak Kalapanulak	saowalak.kal@kmutt.ac.th	0-2470-7513

ADVISOR FOR FIRST YEAR STUDENTS

Program	Degree	Name of Advisor
Biotechnology	Ph.D.	Advisor of Thesis
Biotechnology (Research Program)	M.Sc.	Assoc.Prof.Dr.Chairat Treesubsuntorn e-mail : chairat.tre@kmutt.ac.th Tel: 0-2470-7536
Biotechnology Business and Management	M.Sc.	Dr.Saengchai Akeprathumchai e-mail : saengchai.ake@kmutt.ac.th Tel : 0-24707557
Biotechnopreneur	M.Sc.	Dr.Saengchai Akeprathumchai e-mail : saengchai.ake@kmutt.ac.th Tel : 0-24707557
Postharvest Technology	Ph.D.	Advisor of Thesis
AgriScience and Technology (Postharvest)	M.Sc.	Assoc. Prof. Dr. Chalermchai Wongs-Aree e-mail : chalermchai.won@kmutt.ac.th Tel: 0-2470-7725
Natural Resource Management and Sustainability (NRM)	Ph.D. (IBP)	Advisor of Thesis
Natural Resource Management and ฆ Sustainability (NRM)	M.Sc.	Dr.Worata Klinsawat (Advisor for first year students) e-mail: worata.kli@kmutt.ac.th Tel: 0-24707559 Dr. Lakha Salaipeth (Co-Advisor for first year students) e-mail : lakha.sal@kmutt.ac.th Tel: 0-24707558
Biochemical Technology	Ph.D	Advisor of Thesis
Biochemical Technology	M.Sc.	Assoc.Prof.Dr.Nitnipa Soontorngun (Advisor for first year students) e-mail: nitnipa.soo@kmutt.ac.th Tel: 0-24707753 Asst.Prof.Dr.Rattiya Wealnukul (Co-Advisor for first year students) e-mail: rattiya.wae@kmutt.ac.th

Program	Degree	Name of Advisor
		Tel: 0-24707760
Bioinformatics and Systems Biology (BIF)	Ph.D.	Advisor of Thesis Asst.Prof.Dr. Saowalak Kalapanulak (Advisor for first year students) e-mail: saowalak.kal@mail.kmutt.ac.th Tel: 0-2470-7713
Bioinformatics and Systems Biology (BIF)	M.Sc.	Asst.Prof.Dr. Saowalak Kalapanulak (Advisor for first year students) e-mail: saowalak.kal@mail.kmutt.ac.th Tel: 0-2470-7713 Asst.Prof.Dr. Kanthida Kusonmano (Co-Advisor for first year students) e-mail : kanthida.kus@kmutt.ac.th Tel: 0-2470-7407

PROGRAM IN SCHOOL OF BIORESOURCES AND TECHNOLOGY

Doctoral Degree:

1. Doctor of Philosophy Program in Biotechnology (International Program)
2. Doctor of Philosophy Program in Biochemical Technology (International Program)
3. Doctor of Philosophy Program in Postharvest Technology (International Program)
4. Doctor of Philosophy Program in Bioinformatics and Systems Biology (International Program)
5. Doctor of Philosophy Program in Natural Resource Management and Sustainability (International Program)

Master Degree:

1. Master of Science Program in Biotechnology (International Program)
2. Master of Science Program in AgriScience and Technology (Postharvest) (International Program)
3. Master of Science Program in Biochemical Technology (International Program)
4. Master of Science / Master of Arts Program in Natural Resource Management and Sustainability
5. Master of Science Program in Bioinformatics and Systems Biology (International Program)

Biotechnology Program

The Biotechnology graduate program at the School of Bioresources and Technology is a leading interdisciplinary and innovative international graduate program in Thailand aiming to provide students seeking comprehensive training in a variety of biotechnology disciplines in response to the dramatic expansion of biotechnology-oriented industries worldwide. The curriculum is specifically designed to nurture research competency, analytical skills as well as professional attributes of the students. The program prepares students for careers in the established and emerging field of biotechnology by offering study plans spanning all the aspects of biotechnology including traditional research, industrial practice, and bio-entrepreneurship. Graduate students will be provided with solid training in core subjects such as molecular biotechnology, bioprocess engineering, environmental sciences, and biotechnology business initiatives. There are three modules offered which students can choose according to their interests. 1. Biotechnology: concentrating on in-depth research under close supervision of qualified researchers/advisors. 2. Biotechnopreneur Biotechnology Business and Management emphasizing integrating basic/advanced theory, biotechnology relevant technologies together with business initiatives to develop novel biotechnology products which will create value. This module is internship-based and problem-based to meet the needs of the private sector. 3. Biotechnology Practice School: focusing on applying scientific knowledge to solve problem existing in the real factory environments. Students are therefore exposed to working systems the production as well as R&D facilities. This module is problem-based focusing on real problems of the private sector.

Appendix A: Program Profile in Master of Science Program in Biotechnology & Doctor of Philosophy Program in Biotechnology

Biochemical Technology Program

The Division of Biochemical Technology (BCT) offers a graduate program leading to a Master of Science and Doctor of Philosophy. Our pioneering program was initiated with the explicit purpose of producing exceptional biochemical technologists capable of conducting research in the field of biochemical technology and working in collaboration with engineers or other personnel to develop new technology for efficient utilization of Thailand's bioresources. An enhanced learning and training environment has been created for students and researchers at all levels here and through our national and international collaborations all around the world. Students are provided with opportunities to explore various aspects

of BCT research which focuses on the biochemical processing of biological materials. Present research activities include lipids, enzymes nucleic acids and proteins, flavors and carbohydrates. Courses are interdisciplinary and customer-oriented, open to both graduate students as well as any interested individuals engaged in research and manufacture of biochemical products. A number of student scholarships are available each year for qualified candidates. Our graduates have moved on to careers in academics, as well as in industry, government agencies and non-governmental organizations.

Appendix A: Program Profile in Master of Science Program in Biochemical Technology & Doctor of Philosophy Program in Biochemical Technology

AgriScience and Technology (Postharvest) Program

Product quality and quantity lose at all stages in the postharvest chain, from harvesting, handling, storage, and marketing to the final delivery to consumers. Although highly specific to commodity, location, and growing season, about one-half of the total production of agricultural produce is wasted after harvest. Therefore, reducing postharvest losses of agricultural produce is a major strategy to achieve food security and economic prosperity. To address this need, KMUTT established the postharvest technology program (M.Sc. in AgriScience and Technology). The program institutes a more focused and relevant graduate education to develop competent and active human resources in postharvest technology. It also conducts vigorous and responsive research and development, with the ultimate goal of applying the newly developed and existing technologies to solve problems of postharvest losses and ensure a stable supply of high-quality and safe agricultural products. In addition, innovative postharvest technology increase the competitiveness for both national and international markets.

Appendix A: Program Profile in Master of Science Program in AgriScience and Technology (Postharvest) & Doctor of Philosophy Program in Postharvest Technology

Natural Resource Management and Sustainability

Southeast Asia is a region which still retains an abundance of biological as well as agricultural resources however all of these resources are under intense pressure from an expanding human population. The NRM graduate program focuses on research and development that promotes biodiversity conservation and management as well as efficient use of soil, water, and other agricultural resources. We also recognize the importance of natural resource development to regional countries and the need to create an education and research program that enables interdisciplinary study. Due to differences in regional needs, learning and exchanging knowledge through research in collaboration with local people is encouraged. The program also emphasizes the application of scientific concepts and technologies for problem solving and decision making through the use of case studies as well as training in the real world.

Appendix A: Program Profile in Master of Science Program in Natural Resource Management and Sustainability

Bioinformatics and Systems Biology

Bioinformatics and Systems Biology is a relatively new scientific discipline that is concerned with the study of biological information, ranging from the vast and rapidly accumulating genetic information/databases to patterns of protein expression and their links to disease states. Bioinformatics is very much the scientific and technical foundation of the human genome project and promises to be a central life science of this century. The international Bioinformatics and Systems Biology course at KMUTT is designed for students who desire focused training in the elements of computer science, biology and biochemistry needed for successful careers in this exciting new discipline. Students in our program will receive comprehensive training in genomics, algorithms for sequence analysis, database design and management, software engineering and programming (including web-based development). Each student will apply their skills to a practical project, where they will design and implement a solution to a real-world problem under the guidance of an experienced mentor from industry or academia. The degree program requires a total of 38 credits (for students who have a strong background in both biological and computer sciences). In order to receive a Master's degree, students must demonstrate mastery of the core subject matter (expected to maintain a minimum grade of "B" in all core courses) and pass the English requirement

following KMUTT's criteria. In 24 months, students are expected to gain the knowledge and skills necessary to enter a career in industry or in research as a bioinformatics, systems biology or bio-computing specialists.

Appendix A: Program Profile in Master of Science Program in Bioinformatics and Systems Biology & Doctor of Philosophy Program in Bioinformatics and Systems Biology

NUMBER OF CREDITS REQUIRED

Degree	Number of Credits Required						
	Compulsory	Seminar	Elective	Thesis	Internship	Research Study	Total
Master Degree							
1. Master of Science Biotechnology Program (International Program)							
Plan A.2/1 Biotechnology(Thesis 12 Credits)	12		12	12			36
Plan A.2/2 (Thesis 24 Credits)	12			24			36
Plan B.Biotechnopreneur	16		15			6	37
Plan B.Biotechnology Business and Management	14		16			6	36
2.Master of Science Program in AgriScience and Technology (Postharvest) (International Program)							
A.2/1 (Thesis 36 Credits)				36			36
A.2/2 (Thesis 12 Credits)	14		12	12			38
B (Special Project Study 6 Credits)	16		15			6	37
3.Master of Science Program in Biochemical Technology							
A.2/1 (Thesis 36 Credits)	2*			36			36
A.2/2 (Thesis 12 Credits)	9		16***	12			37
4.Master of Science / Master of Arts Program in Natural Resource Management and Sustainability							
A.2/1 (Thesis 12 Credits)	5		21	12			38
B (Special Project Study 6 Credits)	5		27			6	38
5.Master of Science Program in Bioinformatics and Systems Biology (International Program)							
A.2/1 (Thesis 12 Credits)	17		9	12			38
B (Special Project Study 6 Credits)	17		9		6	6	38

Degree	Number of Credits Required						
	Compulsory	Seminar	Elective	Thesis	Internship	Research Study	Total
Doctoral Degree							
1. Doctor of Philosophy Program in Biotechnology (International Program)							
- M.Sc. Background	2		10	36			48
- B.Sc.Background	3		25	48			76
2.Doctor of Philosophy Program in Postharvest Technology (International Program)							
- M.Sc.Background				48			48
- M.Sc.Background	6		6	36			48
- B.Sc.Background	15		9	48			72
3.Doctor of Philosophy Program in Biochemical Technology							
- M.Sc.Background		3**		48			48
- B.Sc.Background	7	3	16	48			74
4.Doctor of Philosophy Program in Bioinformatics and Systems Biology							
- M.Sc.Background		3*		48			48
- M.Sc.Background		3	9	36			48
- B.Sc.Background		6	18	48			72
5.Doctor of Philosophy Program in in Natural Resource Management and Sustainability							
- M.Sc.Background				48			48
- B.Sc.Background	6		18	48			72

* Reported as S or U with no credit granted.

** S/U evaluation (A letter credit of S is equivalent to a letter grade of B or higher).

*** Students may register for a course offered by another program, but they must register for a course delivered within the student's program with at least 75% or 12 credits.

KMUTT ACADEMIC CALENDAR 2022

GRADUATES AND UNDERGRADUATES
*Exception: Graduates of School of Information Technology

ACTIVITIES BEFORE THE FIRST SEMESTER

July 2022

Wed 6	- First day to submit for retaining student status for the first semester via "New ACIS".
Mon 18 - Fri 22	- Students consult with advisors for registration. - Days for registration and tuition payment processing via "New ACIS". - Days to retain student status under approval, processing via "New ACIS".

August 2022

Mon 1	- Last day for registration payment for the first semester.

THE FIRST SEMESTER (8 AUGUST - 12 DECEMBER 2022)

August 2022

Mon 8	- Classes begin.
Mon 8 - Mon 15	- Days for late registration processing via "New ACIS". (Start paying penalty fee with an amount of 50 baht per day including holidays since Mon 8 August 2022). - Days for late retain student status. (Start paying penalty fee with an amount of 50 baht per day including holidays since Mon 8 August 2022)
Mon 8 - Mon 22	- Days to add and change sessions, processing via "New ACIS". - Days to request for registration with examination time conflict. (For senior undergraduate students).
Mon 8 Aug - Fri 23 Sep	- Days to drop, processing via "New ACIS"
Tue 16 Aug - Tue 6 Sep	- Days for late registration approved by Head of Department. processing via "New ACIS". (Start paying penalty fee with an amount of 50 baht per day including holidays since Mon 8 August 2022)
Thu 18	- Wai Khru Day, (Classes closed - only undergraduates)
Tue 23	- Last day to request to transfer courses/credits.

September 2022

Mon 19	- First day for students to evaluate lecturers' & advisors' performance. (See more details in Teaching Assess System).
Wed 21	- Last day for late retain student status approved by Dean. (Start paying penalty fee with an amount of 50 baht per day including holidays since Mon 8 August 2022)
Thu 22	- Date of removal of student from the register in case that student fails to register without applying for leave of absence.

October 2022

Wed 5 Oct - Fri 11 Nov	- Days to withdraw with W standing.
Thu 13 - Fri 21	- Days to submit a graduation request via "https://pre-grad.kmutt.ac.th"

10

Mon 17 Oct - Fri 18 Nov	- Period for students to evaluate lecturers' & advisors' performance via Teaching Assess System.
Mon 31	- Last day for registration reimbursement.
December 2022	
Tue 13	- Classes end.

ACTIVITIES AFTER THE FIRST SEMESTER & BEFORE THE SECOND SEMESTER

December 2022	
Tue 13	- First day to submit the request to retain student status for second semester via "New ACIS".
Wed 28	- Last day to submit theory, lab, project and thesis examination results.
Fri 30	- Examination results announcement.
January 2023	
Tue 3	- Announcement of lecturers' & advisors' performance evaluations. Lecturers and advisors can check the results via the intranet system.
Tue 3 - Tue 10	- Students consult with advisors for registration. - Days for registration and tuition payment processing via "New ACIS". - Days to retain student status under approval, processing via "New ACIS".
Wed 11	- Last day for registration payment for the second semester.

THE SECOND SEMESTER (16 JANUARY - 26 MAY 2023)

January 2023	
Mon 16	- Classes begin.
Mon 16 - Fri 20	- Days for late registration processing via internet; "New ACIS". (Start paying penalty fee with an amount of 50 baht per day including holidays since Mon 16 January 2023). - Days for late retain student status. (Start paying penalty fee with an amount of 50 baht per day including holidays since Mon 16 January 2023)
Mon 16 - Fri 27	- Days to add and change sessions, processing via "New ACIS". - Days to request for registration with examination time conflict. (For senior undergraduate students)
Mon 16 Jan - Fri 3 Mar	- Days to drop, processing via "New ACIS".
Mon 23 Jan - Tue 14 Feb	- Days for late registration approved by Head of Department, processing via "New ACIS". (Start paying penalty fee with an amount of 50 baht per day including holidays since Mon 16 January 2023).
Fri 27	- Last day to request to transfer courses/credits. - Last day to submit examination results of semester 1/2022.
February 2023	
Mon 13 - Fri 24	- Students inform to attend classes in special semester processing via "New ACIS".
Mon 30	- First day for students to evaluate lecturers' & advisors' performance. (See more details in Teaching Assess System).

March 2023

Wed 1	- Last day for late retain student status approved by Dean. (Start paying penalty fee with an amount of 50 baht per day including holidays since Mon 16 January 2023).
Thu 2	- Date of removal of student from the register in case that student fails to register without applying for leave of absence.
Wed 15 Mar - Mon 1 May	- Days to withdraw with W standing via "New ACIS".
Mon 20 - Fri 31	- Days to submit a graduation request. via "https://pre-grad.kmutt.ac.th"
Mon 27 Mar - Fri 5 May	- Period for students to evaluate lecturers' & advisors' performance via Teaching Assess System.

April 2023

Mon 10 - Sat 15	- Special Vacations.
Mon 17	- Last day for registration reimbursement.

May 2023

Fri 26	- Classes end.

ACTIVITIES AFTER THE SECOND SEMESTER & BEFORE SPECIAL SEMESTER

May 2023

Mon 29 May - Fri 2 Jun	- Students consult with advisors for registration. - Days for registration and tuition payment processing via "New ACIS".

June 2023

Tue 6	- Last day for registration payment for the special semester.
Thu 15	- Last day to submit theory, lab, project and thesis examination results.
Sat 17	- Examination results announcement.
Mon 19	- Announcement of lecturers' & advisors' performance evaluations. Lecturers and advisors can check the results via the intranet system.

SPECIAL SEMESTER (12 June - 4 August 2023)

June 2023

Thu 1 Jun - Fri 4 Aug	- Internship period, (not less than 16 working days).
Mon 12	- Classes begin
Mon 12 - Fri 16	- Days for late registration processing via "New ACIS". (Start paying penalty fee with an amount of 50 baht per day including holidays since Mon 12 June 2023).
Mon 12 - Fri 23	- Days to add, drop and change sessions, processing via "New ACIS".
Fri 23	- Last day to submit examination results of semester 2/2022.
Mon 26 - Fri 30 Jun	- Days to submit a graduation request. via "https://pre-grad.kmutt.ac.th"
Mon 26 Jun - Fri 7 Jul	- Period for students to evaluate lecturers' & advisors' performance via Teaching Assess System. - Days for withdrawal with W standing via "New ACIS".
Fri 30	- Last day for registration reimbursement.

12

August 2023

Fri 4	- Classes end.

ACTIVITIES AFTER SPECIAL SEMESTER

August 2023

Wed 16	- Last day to submit theory, lab, project and thesis examination results.
Fri 18	- Examination results announcement.
Mon 21	- Announcement of lecturers' & advisors' performance evaluations. Lecturers and advisors can check the results via the intranet system.

September 2023

Fri 1	- Last day to submit examination results of semester S/2022. - Last day to submit practical training results.

Remarks :

1. Students must register, add, change, drop and withdraw via "New ACIS".
2. Students who owe tuition fees cannot register in the subsequent semester.
3. Probation students in semester 2/2021 must consult with their advisors about registration during the specified period. Without doing so, they will not allow to register in semester 1/2022
4. Probation students in semester 1/2022 must consult with their advisors about registration during the specified period. Without doing so, they will not allow to register in semester 2/2022.
5. Students must pay tuition fees before add, change and drop courses.
6. Students who want to take leave in the next semester have to ask for the committee of faculty's approval and submit a request in order to be able to retain student status via "New ACIS".
7. Students who do not register or retain student status by identified date must pay penalty fee with an amount of 50 baht per day including holidays.
   -The first semester, start paying penalty fee from Monday 8 August 2022.
   -The second semester, start paying penalty fee from Monday 16 January 2023.
   -The special semester, start paying penalty fee from Monday 12 June 2023.
8. Students who want to transfer courses or credits must request during the specified period
   -The first semester, until Tuesday 23 August 2022.
   -The second semester, until Friday 27 January 2023.
9. Students who want to reimburse for tuition fees must request during the specified period.
   -The first semester, until Monday 31 October 2022.
   -The second semester, until Monday 17 April 2023.
   -The special semester, until Friday 30 June 2023.

HOLIDAYS 2022-2023

Wed 13 July 2022	-	Asanha Bucha Day (วันอาสาฬหบูชา)
Thu 14 July 2022	-	Buddhist Lent Day (วันเข้าพรรษา)
Fri 15 July 2022	-	Special Holiday (วันหยุดพิเศษ)
Thu 28 July 2022	-	His Majesty the King's Birthday (วันเฉลิมพระชนมพรรษาฯ)
Fri 29 July 2022	-	Special Holiday (วันหยุดพิเศษ)
Fri 12 August 2022	-	Mother's day (วันแม่แห่งชาติ)
Thu 13 October 2022	-	King Bhumibol Memorial Day (วันคล้ายวันสวรรคต รัชกาลที่ 9)
Fri 14 October 2022	-	Special Holiday (วันหยุดพิเศษ)
Sun 23, Mon 24 October 2022	-	King Chulalongkorn Memorial Day (วันปิยมหาราช)
Mon 5 December 2022	-	Father's day (วันพ่อแห่งชาติ)

Sat 10, Mon 12 December 2022	-	Constitution Day (วันรัฐธรรมนูญ)
Fri 30 December 2022	-	Special Holiday (วันหยุดพิเศษ)
Sat 31 December 2022	-	New Year's Eve (วันสิ้นปี)
Sun 1, Mon 2 January 2023	-	New Year's Day (วันปีใหม่)
Mon 6 March 2023	-	Makha Bucha Day (วันมาฆบูชา)
Thu 6 April 2023	-	Chakri Memorial Day (วันจักรี)
Thu 13 - Sat 15 April 2023, Mon 10 - Sat 15 April 2023	-	Songkran Festival (เทศกาลสงกรานต์) and Vacation
Thu 4 May 2023	-	Coronation Day (วันฉัตรมงคล)
* May 2023	-	Royal Ploughing Ceremony and Farmer's Day (วันพืชมงคล)
Sat 3, Mon 5 June 2023	-	Her Majesty the Queen's Birthday (วันเฉลิมพระชนมพรรษาฯ)
Sat 3 June 2023	-	Visakha Bucha Day (วันวิสาขบูชา)
Fri 28 July 2023	-	His Majesty the King's Birthday (วันเฉลิมพระชนมพรรษาฯ)
Tue 1 August 2023	-	Asanha Bucha Day (วันอาสาฬหบูชา)
Wed 2 August 2023	-	Buddhist Lent Day (วันเข้าพรรษา)
Sat 12, Mon 14 August 2023	-	Mother's day (วันแม่แห่งชาติ)

RESEARCH ETHICS AND COMPLIANCE

The University promotes research within the University in accordance with international research ethics and compliance criteria, international research ethics guidelines, and the requirements of both national and international research funding sources and academic journals. As a result, the University has issued the Research Integrity Policy 2021 to university personnel who work on research projects to maintain honor, reputation, morality, and ethics that are recognized by the domestic and international communities. (For more information, see https://ripo.kmutt.ac.th/wp-content/uploads/ 2022/03/ref1kmuttri64.pdf)

There are four types of research ethics training (more information can be found at https://ethics.kmutt.ac.th/)

1 **Human research ethics** (https://ethics.kmutt.ac.th/IRB/)

It is carried out by KMUTT's Institutional Review Board (KMUTT - IRB) to raise awareness of human-related research in accordance with international ethical standards, which must take into account the ethical principles of conducting research, protecting safety rights, and reducing risks that may negatively affect Volunteers.

2 Animal research ethics (https://ethics.kmutt.ac.th/iacuc/)

It is carried out for scientific work of the operation facility by the Institutional Animal Care and Use Committee (IACUC) and promotes the Code of Conduct for Animal Care and Use under the guidelines, requirements, and rules related to Rasing and Using Animals for research purposes.

3. Biosafety (https://ethics.kmutt.ac.th/IBC/)

It is carried out by KMUTT's institutional biosafety committee (KMUTT-IBC) to supervise, control, and manage potential risks in R&D and mobility, management and utilization of genetically modified organisms (GMOs), pathogens, plants, and animals under practices and controlled conditions for worker, community, and environmental safety.

4. Research Integrity (RI)

To maintain the highest standards of research ethics, the university encourages its staff, including lecturers, researchers, and students, to recognize the importance of research ethics, conduct research responsibly, and Be honest and fair in conducting research.

Graduate students are required to attend two parts of Research Integrity (RI) training as follows:

1. Theoretical via CITI Program
2. Hands-on session organized by Research, Innovation, and Partnerships Office, KMUTT

Ethics and research ethics training program

Graduate School	Condition	Training program	
		Theory	Workshop
		English	*Thai/English*
Master's degree and Doctoral Degree	The student must complete the Training program before taking the proposal Exam.	CITI Program Website: https://www.citiprogram.org CITI Program Manual: https://bit.ly/3DjRtzF	Organized By RIPO KMUTT

***********Students are required to complete the two trainings before taking the thesis proprosal examniation.************

FOR MORE INFORMATION, PLEASE VISIT https://ethics.kmutt.ac.th/ .

SBT's Activities

Activities	Date
1. Faculty Blessing ceremony (28 th Anniversary)	19 September 2022

EDUCATION FEES

1.1 Education fees to be collected in each academic year;

1.1.1 Health and life insurance 2,000 THB

1.2 Education fees to be collected in each semester;

1.2.1 Education Service Fee

Regular semester 30,000 THB per semester

Summer Session 15,000 THB per session

1.2.2 Credit fees for coursework/independent study/thesis

Social and Humanities

Regular semester 3,000 THB per credit

Summer session 6,000 THB per credit

1.2.3 Credit fees for coursework/independent study/thesis

Social and Humanities

Regular semester 4,000 THB per credit

Summer session 8,000 THB per credit

1.2.4 If credit fees for coursework/independent study/thesis for full fee programs are higher than the credit fees as in item 1.2.2 and 1.2.3, the rates of full fee programs shall be paid.

1.3 Education fees to be collected on variable occasions.

1.3.1 The registration for a thesis examination or its equivalent paper

From 6 credits to not over 12 credits 10,000 THB

From 12 credits to not over 36 credits	15,000 THB
Over 36 credits	20,000 THB

Education fees and credit fees for coursework/independent study/thesis as in the above mentioned rate have been enacted for international students who study non-degree courses, except for exchange students under a cooperative agreement with the university.

Students, who must study fundamental courses as required by the university, must pay education fees based on this regulation.

Students who complete all coursework as the program requires, but still work on experiments for a thesis or equivalent paper in the next regular semester or summer session, must pay credit fees for the thesis or equivalent paper – including education fees based on items 1.1-1.2 of this regulation.

Students must pay education fees within the period set by the University. The University will not remit money except when courses are cancelled by the University.

Rules and regulations according to this regulation are based on an announcement by the University.

The President shall govern the provisions of this regulation. The judgment of the President is considered final.

1.4 EDUCATION fees for Doctor of Philosophy Program in Bioinformatics and Systems Biology.

Tuition fee per semester: 38,000 Baht

Total cost: Type 1.1/2.1 228,000 Baht per student and Type 2.2 380,000 Baht per student

RULES AND REGULATIONS

For The Regulations of King Mongkut's University of Technology Thonburi, Please visit the website: https://www.eds.kmutt.ac.th/rules-regulation .

GUIDELINES FOR THE QULIFICATION EXAMINATION AND THESIS EXAMINATION, SCHOOL OF BIORESOURCES AND TECHNOLOGY

1. The Process of Qualifying Examination (QE)

1.1 Nomination of QE committee

- Supervisor submits the nominated committee of QE (through the QE form of each division) which are approved by the Head of division to **SBT educational service section** within 4 weeks after semester commencement.
- **SBT educational service section** checks accuracy of all documents following the regulation of division.
- **SBT educational service section** then proposes the Associate Dean of Academic Affairs the documents for subsequent checking prior to submission to **'SBT Board of Directors'**.
- After approval, **SBT educational service section** informs the results to supervisor.

1.2 Appointment of QE date

- Supervisor notices the QE date to **SBT educational service section** to provide the committee an invitation letter.
- **SBT educational service section** prepares a memorandum of compensation for external assessor(s) and sends it to the Dean for approval.
- **SBT educational service section** sends the committee an invitation letter.

1.3 On QE date

- **SBT educational service section** provides all QE evaluation forms to supervisor.
- QE committee manage the examination following the division regulation (check out details of the regulation at http://web.kmutt.ac.th/sbt/download.php "Qualifying Examination")
- Supervisor submits the QE result (either passed and failed*) to **SBT educational service section**.

1.3.1 In case of the QE passed

- **SBT educational service section** subsequently proposes the result to the Head of the division and the Dean for approval.
- After approval, the result is submitted to KMUTT registration section for recording.

1.3.2 In case of the QE failed in the 1st attempt

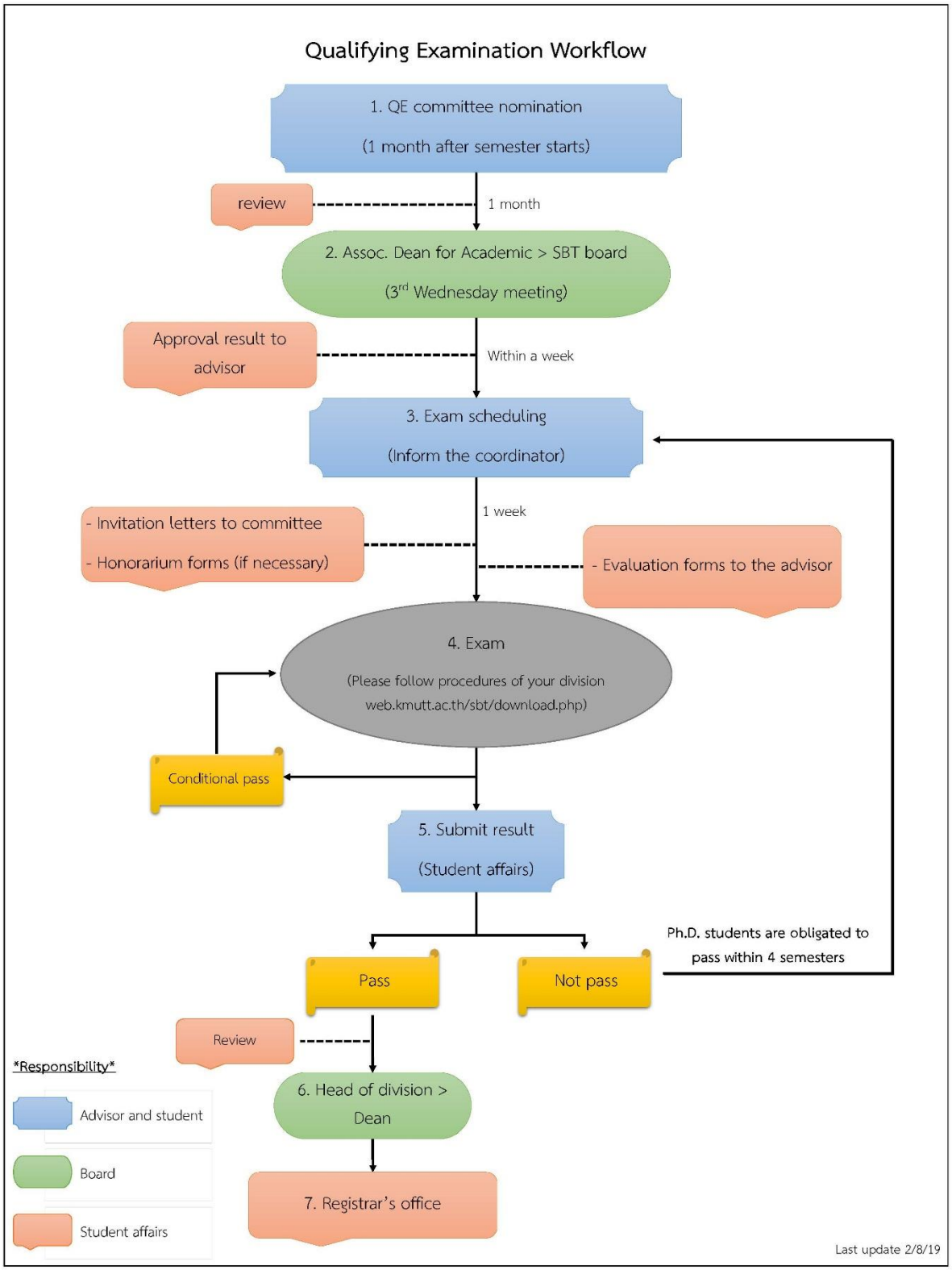
1.3.2.1 Re-attempt process of QE

- Supervisor submits the re-QE date to **SBT educational service section**. The operating process is followed as above.

1.3.2.2 According to the 30th rule (Qualifying Examination) of KMUTT regulation of graduate education in 2019:

Qualifying Examination is managed for evaluating the current knowledge and competency of Ph.D. candidate who needs to be passed through the regulation of division to be authorized for proposing a proposal, doing the research, and taking the defensive examination as:

- PhD student based on bachelor's degree must take the QE by first 4 ordinary semesters.
- PhD student based on master's degree must take the QE by first 3 ordinary semesters.
- If the result is failed or any student does not take QE by the due date, the student status is then deprived.


Qualifying Examination Workflow
1. QE committee nomination
(1 month after semester starts)
review
1 month
2. Assoc. Dean for Academic > SBT board
(3rd Wednesday meeting)
Approval result to advisor
Within a week
3. Exam scheduling
(Inform the coordinator)
1 week
- Invitation letters to committee
- Honorarium forms (if necessary)
- Evaluation forms to the advisor
4. Exam
(Please follow procedures of your division
web.kmutt.ac.th/sbt/download.php)
Conditional pass
5. Submit result
(Student affairs)
Ph.D. students are obligated to pass within 4 semesters
Pass
Not pass
Review
6. Head of division > Dean
7. Registrar's office
Responsibility
Advisor and student
Board
Student affairs
Last update 2/8/19

2. The Process of Thesis Proposal Examination

2.1 Supervisor submits **SBT educational service section** the proposal and the nominated committee (G1 form), which are approved by the Head of division, 2 months after semester commencement.

2.2 **SBT educational service section** organizes all document proposed to SBT Academic Committee for primary checking within a month.

2.2.1 In case of major revision requested by SBT Academic Committee:

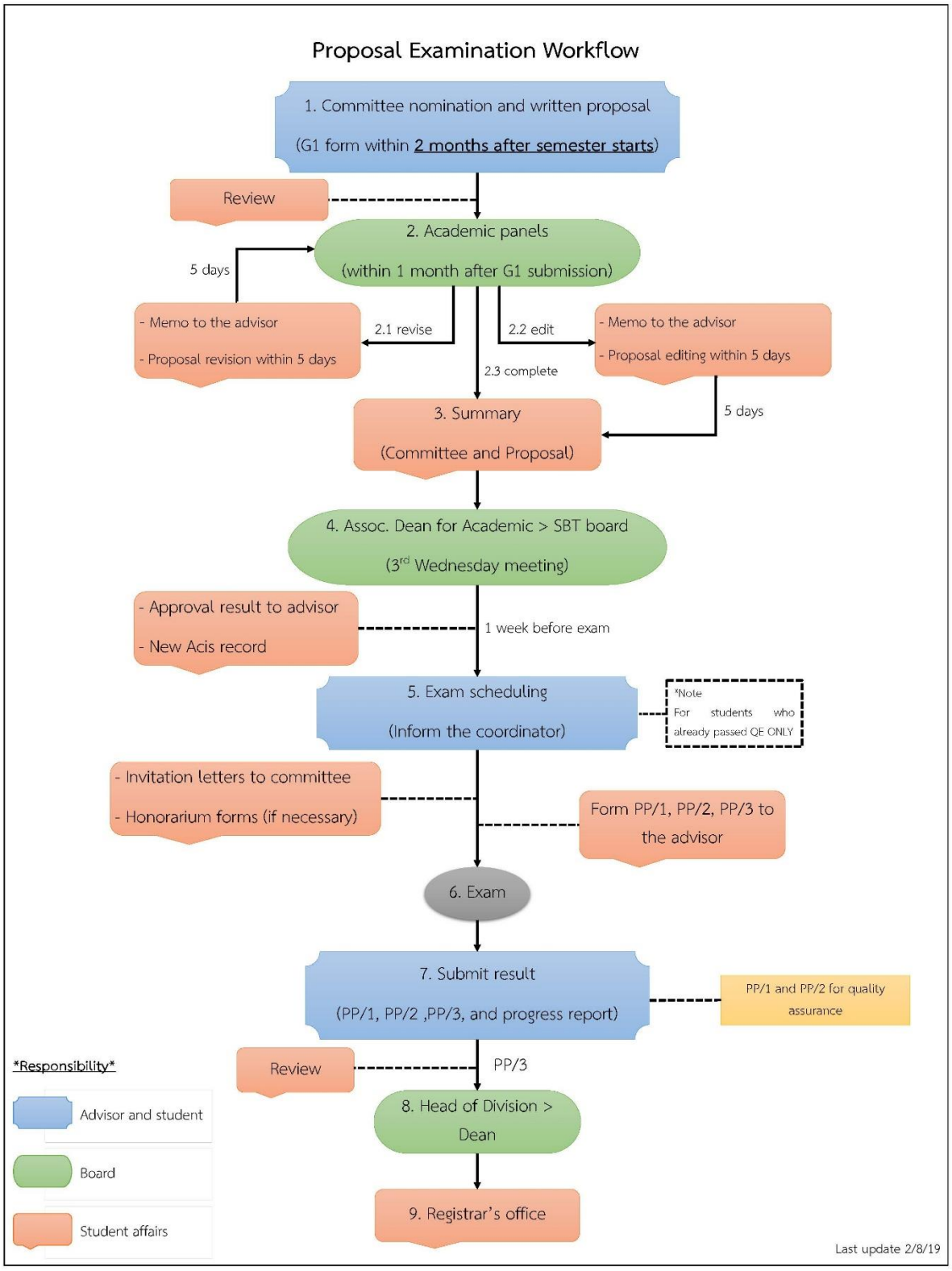
- The Associate Dean of Academic Affairs provides supervisor a memorandum of opinion and suggestion of SBT Academic Committee.
- Student revises the proposal under supervisor's approval. The revised proposal including the original proposal is re-submitted to **SBT educational service section** within 5 days after notices.
- **SBT educational service section** sends the Associate Dean of Academic Affairs the response of supervisor including the revised and original proposals to be informed accordingly.
- **SBT educational service section** provides a memorandum and all proposal details and submits them to **'SBT Board of Directors'**.
- After approval, **SBT educational service section** provides a memorandum signed by the Associate Dean of Academic Affairs and informs supervisor.
- **SBT educational service section** records the committee's name and the title of proposal in 'New Acis' system and submits the registration section the information for checking.

2.3 Supervisor informs the proposal examination date to **SBT educational service section** to provide an invitation letter to the committee.

- **SBT educational service section** prepares a memorandum of compensation for external assessor and submits it to the Dean to be approved and signed.
- **SBT educational service section** provides the supervisor PP/1 Evaluation form, PP/2 Evaluation report, and PP/3 Report on Result form.

2.4 Supervisor immediately sends **SBT educational service section** the completed documents of PP/1 Evaluation form, PP/2 Evaluation report, PP/3 Report on Result form, and student progress report soon after taking the proposal examination.

- The student has to write details in the progress report form and sends it to **SBT educational service section**.
- **SBT educational service section** submits all PP/1 Evaluation form, PP/2 Evaluation report, PP/3 Report on Result form, and student progress report to the Head of the division and the Dean to be approved.
- **SBT educational service section** sends PP/3 Report on Result form, and student progress report to KMUTT Registration Section for checking.


Proposal Examination Workflow
1. Committee nomination and written proposal
(G1 form within 2 months after semester starts)
Review
2. Academic panels
(within 1 month after G1 submission)
5 days
- Memo to the advisor
- Proposal revision within 5 days
2.1 revise
2.2 edit
- Memo to the advisor
- Proposal editing within 5 days
2.3 complete
5 days
3. Summary
(Committee and Proposal)
4. Assoc. Dean for Academic > SBT board
(3rd Wednesday meeting)
- Approval result to advisor
- New Acis record
1 week before exam
5. Exam scheduling
(Inform the coordinator)
*Note
For students who already passed QE ONLY
- Invitation letters to committee
- Honorarium forms (if necessary)
Form PP/1, PP/2, PP/3 to the advisor
6. Exam
7. Submit result
(PP/1, PP/2 ,PP/3, and progress report)
PP/1 and PP/2 for quality assurance
Review
PP/3
8. Head of Division > Dean
9. Registrar's office
Responsibility
Advisor and student
Board
Student affairs
Last update 2/8/19

3. The Process of Thesis Progress Examination

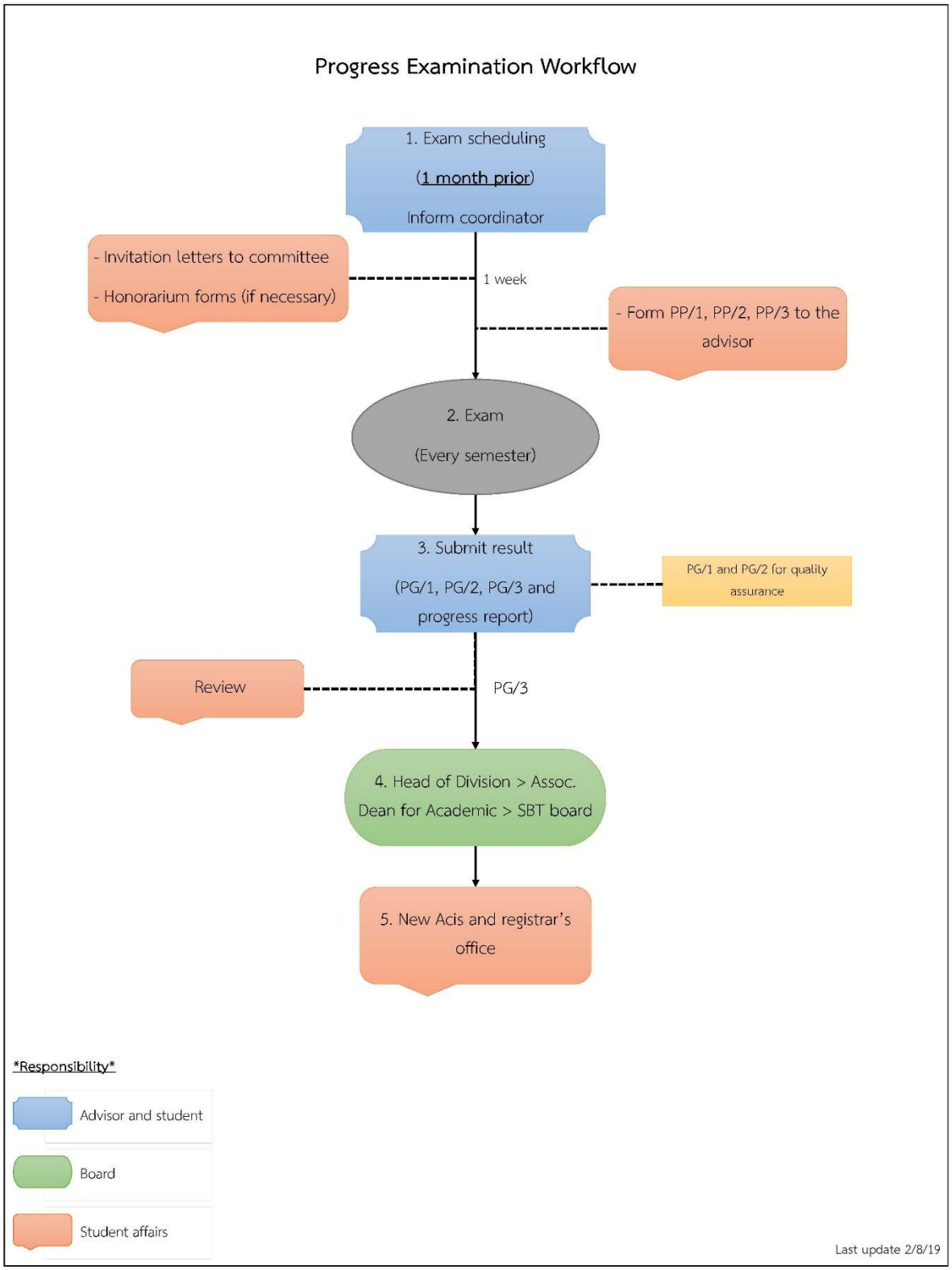
3.1 Supervisor informs the thesis progress examination date to **SBT educational service section** to provide an invitation letter for the committee, 4 weeks prior to the examination.

- **SBT educational service section** prepares a memorandum of compensation for external assessor(s) and submits it to the Dean to be approved and signed.
- **SBT educational service section** sends the committee the completed invitation letter.
- **SBT educational service section** provides the supervisor PG/1 Evaluation form, PG/2 Evaluation report, and PG/3 Report on Result form.

3.2 Students must take the thesis progress examination as part of the committee investigation by the deadline set by the KMUTT academic calendar.

3.3 Supervisor immediately sends **SBT educational service section** completed documents of PG/1 Evaluation form, PG/2 Evaluation report, PG/3 Report on Result form, and student progress report soon after taking the progress examination.

- **SBT educational service section** submits all PG/1 Evaluation form, PG/2 Evaluation report, PG/3 Report on Result form, and student progress report to the Head of the division to be approved.
- **SBT educational service section** sends the results of thesis progress examination to the Associate Dean of Academic Affairs to be approved and then submits them to **'SBT Board of Directors'**.
- **SBT educational service section** records the evaluation of thesis progress in 'New Acis' system.
- **SBT educational service section** sends the PG/3 Report on Results and student progress report to KMUTT Registration Section for checking.


Progress Examination Workflow
1. Exam scheduling
(1 month prior)
Inform coordinator
- Invitation letters to committee
- Honorarium forms (if necessary)
1 week
- Form PP/1, PP/2, PP/3 to the advisor
2. Exam
(Every semester)
3. Submit result
(PG/1, PG/2, PG/3 and progress report)
PG/1 and PG/2 for quality assurance
Review
PG/3
4. Head of Division > Assoc. Dean for Academic > SBT board
5. New Acis and registrar's office
Responsibility
Advisor and student
Board
Student affairs
Last update 2/8/19

4. **The Process of Thesis Defense Examination**

4.1 Committee nomination of thesis defense examination

- Supervisor nominates thesis defense committee (T1 form: request for thesis defense committee nomination) approved by the Head of the division.
- The form is considered and re-checked by the Associate Dean of Academic Affairs prior to submission to **'SBT Board of Directors'**.
- **SBT educational service section** informs the supervisor about the approval.

4.2 Appointment of thesis defense examination

- Supervisor designates the thesis defense date (T2 form: request for thesis defense examination) approved by the Head of the division.
- **SBT educational service section** sends the appointment date to the Associate Dean of Academic Affairs and then the Dean to be approved.
- **SBT educational service section** prepares invitation letter for committee and a memorandum of compensation for external assessor(s) and submits it to the Dean to be signed.
- **SBT educational service section** provides the supervisor DF/1 Evaluation form, DF/2 Evaluation report, DF/3 Report on Result form, and PG/3 Report on Result form.

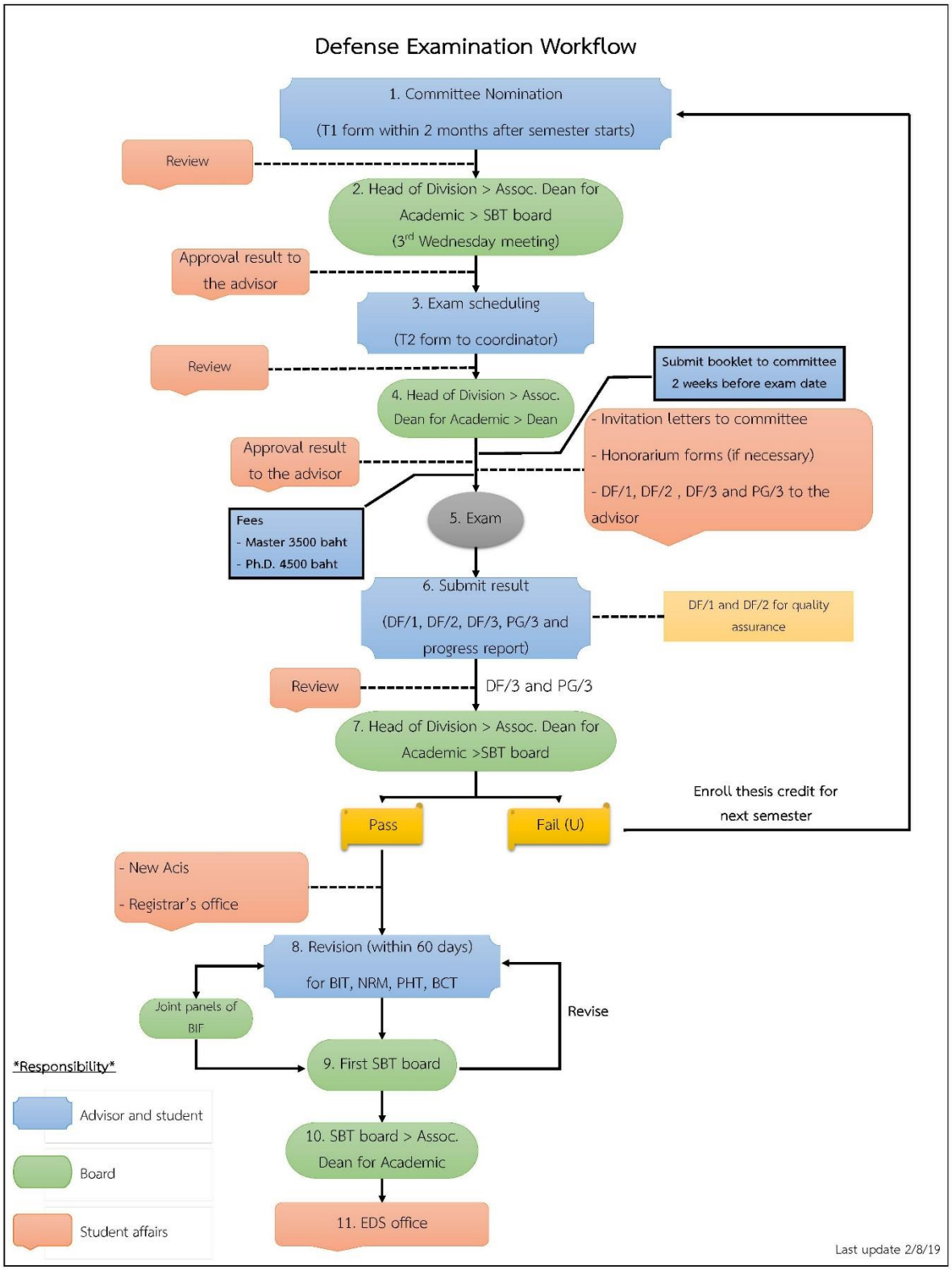
4.3 Supervisor immediately sends **SBT educational service section** completed documents of DF/1 Evaluation form, DF/2 Evaluation report, DF/3 Report on Result form, and student progress report soon after taking the thesis defense examination.

4.4 **SBT educational service section** sends the results of thesis progress examination to the Head of division and the Associate Dean of Academic Affairs to be approved and then submitted to **'SBT Board of Directors'**.

4.4.1 In case of the examination failed, students have to register thesis credits in the next semester while the thesis credit in the current semester is evaluated as 'U'.

4.4.2 In case of the examination passed:

- **SBT educational service section** sends the results of thesis progress examination to the Head of the division to be signed.
- **SBT educational service section** records the evaluation of thesis defense in 'New Acis' system and sends the Report on Results and student Progress Report form to KMUTT Registration Section for checking.
- Student edits the thesis report following the comments given by the committee and sends the revised thesis to the supervisor for checking. The completed thesis book without page making must be submitted to **SBT educational service section** within 1 or 2 months after thesis defense.
- Thesis book is circulated to **'SBT Board of Directors'** for approval.
- **SBT educational service section** gives supervisor the comments of **'SBT Board of Directors'** to be considered.
- Student revises thesis book following the comments approved by supervisor prior to re-submission to **SBT educational service section**.
- Graduate must be approved by **'SBT Board of Directors'** following the SBT regulation.
- **SBT educational service section** provides a memorandum of graduation (followed by the decision of **'SBT Board of Directors'**) and submits it to the Associate Dean of Academic Affairs to be signed.
- **SBT educational service section** sends the thesis book to EDS for checking accuracy.


Defense Examination Workflow
1. Committee Nomination
(T1 form within 2 months after semester starts)
Review
2. Head of Division > Assoc. Dean for Academic > SBT board
(3rd Wednesday meeting)
Approval result to the advisor
3. Exam scheduling
(T2 form to coordinator)
Review
Submit booklet to committee 2 weeks before exam date
4. Head of Division > Assoc. Dean for Academic > Dean
- Invitation letters to committee
- Honorarium forms (if necessary)
- DF/1, DF/2 , DF/3 and PG/3 to the advisor
Approval result to the advisor
Fees
- Master 3500 baht
- Ph.D. 4500 baht
5. Exam
6. Submit result
(DF/1, DF/2, DF/3, PG/3 and progress report)
DF/1 and DF/2 for quality assurance
Review
DF/3 and PG/3
7. Head of Division > Assoc. Dean for Academic >SBT board
Enroll thesis credit for next semester
Pass
Fail (U)
- New Acis
- Registrar's office
8. Revision (within 60 days)
for BIT, NRM, PHT, BCT
Joint panels of BIF
Revise
9. First SBT board
Responsibility
Advisor and student
Board
Student affairs
10. SBT board > Assoc. Dean for Academic
11. EDS office
Last update 2/8/19

SCHOLARSHIP FOR INTERNATIONAL STUDENTS

- Petchra Pra Jom Klao master's degree Scholarship
- Petchra Pra Jom Klao Doctoral degree Scholarship
- Greater Mekong Sub-region (GMS) Scholarship
- Sahapunya scholarship (Only For students from Cambodia, Laos, Myanmar, and Vietnam)

For more information, please visit the website https://sbt.kmutt.ac.th/en/scholarships/

DOWNLOAD FORMS

Prospective Students: https://sbt.kmutt.ac.th/en/prospective-students-downloads/

- Application Form for SBT's scholarships Application Form for Non-Regular Students (Research Internship program, Exchange student program)
- Student Manual (English)

Current Students: https://sbt.kmutt.ac.th/en/current-students-downloads/

- Student Handbook
- Student's Internet Registration Manual
- Rule and Regulation
- Form and Request Form
- Qualifying & Comprehensive Examination
- Thesis/Dissertation Manual
- Guideline for Ph.D Dissertation Format
- Thesis
- Seminar Manual
- Special Problem For Natural Resource Management Program

LABORATORY IN SCHOOL OF BIORESOURCES AND TECHNOLOGY

Program / Laboratory	Head of Laboratory	Contact
Biotechnology Program		
Algal Biotechnology	Asst.Prof.Dr.Marasri Ruengjitchatchawalya	e-mail : marasri.rue@kmutt.ac.th Tel 0-2470-7481
Animal Cell Culture	Asst.Prof.Dr.Kanokwan Poomputsa	e-mail : kanokwan.poo@kmutt.ac.th Tel 0-2470-7500
Microbial Fermentation Technology	Assoc.Prof.Dr.Yuwapin Dandusitapunth	e-mail : yuwapin.dan@kmutt.ac.th Tel 0-2470-7529
Remediation	Assoc.Prof.Dr.Paitip Thiravetyan	e-mail : paitip.thi@kmutt.ac.th Tel 0-2470-7535
Sensors Technology	Assoc.Prof.Dr.Werasak Surareungchai	e-mail : werasak.sur@kmutt.ac.th Tel 0-2470-7474
Fungal Biotechnology	Assoc.Prof.Dr.Supapon Cheevadhanarak	e-mail: supaponche@yahoo.com Tel 0-2470-7464
Excellent Center of Waste Utilization and Management	Assoc.Prof.Dr.Pawinee Chaiprasert	e-mail : pawinee.cha@kmutt.ac.th Tel 0-2470-7525
Biodiversity	Dr.Lakha Salaipetch	e-mail : lakha.sal@kmutt.ac.th Tel 0-2470-7558
Biointerface Laboratory	Dr. Sarawut Cheunkar	e-mail: sarawut.che@kmutt.ac.th. Tel: 0-24707431
Natural Resource Management Program		
Community Resources Management	Asst.Prof.Dr.Sudarut Tripetchkul Dr.Lakha Salaipetch	e-mail : sudarut.tri@kmutt.ac.th Tel 0-2470-7556
Conservation Ecology	Assoc.Prof.Dr.George A.Gale	e-mail : george.and@kmutt.ac.th Tel 0-2470-7555

Postharvest Technology Program		
Postharvest Biochemistry and Molecular Biology	Assoc.Prof.Dr.Chalermchai Wongs-Aree	e-mail: chalermchai.won@kmutt.ac.th Tel 0-2470-7725
Postharvest Physiology and Pathology	Assoc.Prof.Dr.Pongphen Jitareerat Assoc.Prof.Dr.Apiradee Uthairatanakij	e-mail : pongphen.jit@kmutt.ac.th Tel 0-2470-7722 e-mail: apiradee.uth@kmutt.ac.th Tel 0-2470-7724
Postharvest Quality and Logistic	Assoc.Prof.Dr.Varit Srilaong	e-mail : varit.sri@kmutt.ac.th Tel 0-2470-7726
Seed and Grain Technology	Assoc.Prof.Dr.Songsin Photchanachai	e-mail : songsin.pho@kmutt.ac.th Tel 0-2470-7723
Biochemical Technology Program		
Carbohydrate Technology	Dr. Yuree Wandee Dr. Ditpon Kotatha	e-mail : yuree.wan@kmutt.ac.th Tel 0-2470-7761 e-mail : ditpon.kot@kmutt.ac.th
Enzyme Technology	Assoc.Prof.Dr.Khanok Ratanakhanokchai	e-mail : khanok.rat@kmutt.ac.th Tel 0-2470-7755
Phytobioactive and Flavor Lab./ Agricultural and Functional Food Processing.	Assoc.Prof.Dr.Nutta Laohakunjit Dr.Nattapon Kaisangsri Dr.Orrapun Selamassakul	e-mail : nutta.lao@kmutt.ac.th Tel 0-2470-7752
Lipid Technology Research Group	Assoc.Prof.Dr.Kornkanok Aryusuk	e-mail : kornkanok.ary@kmutt.ac.th Tel 0-2470-7758
Gene Technology	Assoc.Prof.Dr.Nitnipa Soontorngun	e-mail : nitnipa.soo@kmutt.ac.th Tel 0-2470-7753
Lignin Technology Research Group	Asst.Prof.Dr.Paripok Phitsuwan	e-mail: paripok.phi@kmutt.ac.th Tel 0-2470-7751

Bioinformatics and System Biology Program		
Center for Agriculture Systems Biology (CASB)/Systems Biology and Bioinformatics (SBI)	Assoc.Prof.Dr. Treenut Saithong Asst.Prof.Dr. Saowalak Kalapanulak	e-mail : treenut.sai@kmutt.ac.th Tel 0-2470-7714 e-mail : saowalak.kal@kmutt.ac.th Tel 0-2470-7713
Bioactive compound & Efficient platform (BICEP)	Asst.Prof.Dr.Marasri Ruengjitchatchawalya Asst.Prof.Dr.Teeraphan Laomettachit	e-mail : marasri.rue@kmutt.ac.th Tel 0-2470-7481 e-mail : teeraphan.lao@kmutt.ac.th. Tel 0-2470-7572

OFFICE OF DEAN, EMERGENCY CALL &FACILITIES

Name – Surname	Position	Room	Telephone	Responsibilities
Mrs.Nutrada Keawgramloy Mr. Apinan Waiyasilpa	Personal	A3-204	0-2470-7702	●Information, News and activities to be announced
Ms.Thunyasiri Junnim Mr.Pornchai Cheysanium	Service	A3-204	0-2470-7703	●Booking classroom and meeting
Mr.Pongthorn Chukam	Building and Ground	A3-204	0-2470-7704	●Class room and meeting facilities (LCD,Visualizer,computer,Notebook,Sound equipments) ●Request for Building Keycard ●Request for room using after working hours ●Request for Car Sticker
Ms. Nattarin Sadakorn	Policy and Planning / Research Support	A3-205	0-2470-7719	●Policy and Planning ●Research support ●Post Doctoral Degree
Ms. Rungarun Waisayawan Ms.Waraporn Katepradit	Academic Service	A3-205	0-2470-7705 0-2470-7709	●All academic-relevant helps ●Student request forms, e.g., delayed registration,postpone the tuition fee payment, dropping off; Academic information; Proposal examination ;Thesis progression; Thesis defense; Seminar;scholarships
Ms. Pakpinun Thaninsukpisan	Financial	A3-206	0-2470-7707	●Financial service
Ms.Waraporn Boontook	Procurement	A3-206	0-2470-7711	●Purchase

In case of emergency, call 0-2470-7399 / ext. 7399

- Call 0-2470-7700 / ext. 7700 for School of Bioresources and Technology Building
- Call 0-2470-7384 / ext. 7384 for Central security

Health Service Section (Bangkhunthian) 1st Floor, SBT Building

- Opening hours: Monday - Friday, 9.00 a.m. to 17.00 p.m.
- Treatment by doctors: Monday Tuesday and Friday

  Monday 12.30 – 14.30 /Tuesday 10.00a.m. to13.00 p.m. / Friday 13.00a.m. to15.00 p.m.

Library (Bangkhunthian) 2nd School of Architecture and Design

- Opening hours: Monday- Friday, 9.00 a.m. to 5.00 p.m. Saturday, 9.30 a.m. to 4.00 p.m.

Appendix A: Program Profile

Doctor of Philosophy Program in Biotechnology

Master of Science Program in Biotechnology

Doctor of Philosophy Program in Postharvest Technology

Master of Science Program in AgriScience and Technology (Postharvest)

Doctor of Philosophy Program in Bioinformatics and Systems Biology

Master of Science Program in Bioinformatics and Systems Biology

Doctor of Philosophy Program in Natural Resource Management and Sustainability

Master of Science Program in Natural Resource Management and Sustainability

Doctor of Philosophy Program in Biochemical Technology

Master of Science Program in Biochemical Technology

1. **Program title:** Doctor of Philosophy Program in Biotechnology
2. **Awarding institution:** King Mongkut's University of Technology Thonburi
3. **Teaching Institution:** School of Bioresources and Technology

   King Mongkut's University of Technology Thonburi Bangkhunthian
4. **Mode of study**: Full Time
5. **Language of study:** English
6. **Admission Criteria:**

Plan	Eligible Applicants
Plan 2.1 (For Bachelor's Degree Holder)	1. Completed Bachelor's degree in Sciences or Engineering or other equivalent programs with honors or 2. Have research experiences and/or publications approved by the program committee to be a candidate Ph.D. student or 3. Studying in Master's degree and obtain a cumulative grade point average not less than 3.50
Plan 2.2 (For Master's Degree Holder)	1. Complete Master's degree in Science or Engineering or other equivalent programs with a cumulative grade point average not less than 3.50 or 2. Have some research experiences or academic background approved by the program committee to be a candidate Ph.D. student.
Note : All applicants must submit standardized English Proficiency Test Score at the level indicated in the announcement on the KMUTT English Language Requirement for Doctoral Degree.	

7. **Program objective:**

   This program aims to offer advanced training appropriate for careers as academics, researchers, entrepreneurs, etc. in the fields of biotechnology. Students will gain comprehensive knowledge and competence in their specific research area as well as general knowledge in molecular biology, bioinformatics and system biology, bioprocess engineering, nanobiotechnology and other related fields through coursework, laboratory-based research, in-house seminars, and national and international conferences participation, etc.

8. Program Learning Outcomes:

Program Learning Outcomes		Teaching and Learning Methods
PLO1 : Students have ability to bring about new knowledge and/or innovations in biotechnology by being able to;		
Sub PLO1A	Explain the principles of advanced biotechnology and related fields.	Lecture-based teaching that provides principle and applications aspects, seminar, tutorial, self-directed study and peer review sessions
Sub PLO1B	Systematically apply the principles and concepts of multidisciplinary research to identify research problems and conduct research to find solutions.	Directed independent learning activities, project-based and problem-based learning, special research project, thesis
Sub PLO1C	Choose proper mathematical/ statistical/ computer tools together with the related information for effective analysis of research results.	Lecture-based teaching using a range of tools to solve 'real' and 'theoretical' case-studies and problem-based learning scenarios.
Sub PLO1D	Create new knowledge or innovations in biotechnology	Research proposal, experimental works, project presentation and report.
PLO 2 : Students have ability to communicate and exchange academic issues/finding/solution effectively in both oral and written presentations by being able		
Sub PLO2A	Communicate effectively in English to present ideas orally and in writing.	Seminar, group discussion, thesis progress report and defense, conference participations, manuscript writing, thesis writing
Sub PLO2B	Articulate an extended reasoned argument for technical and scientific information.	Seminar, group discussion and problem-solving assignments, thesis presentation and defense, conference participations
PLO 3: Students realize the value of continuous self-improvement and strive to achieve high quality work.		Guided, self-directed and student-centered learning, with increasing independence of approach, thought and process.
PLO 4: Students have ability to work in teams with both Thais and foreigners in either leadership or partner roles.		Laboratory works, group assignments
PLO 5: Students demonstrate an understanding of, and commitment to, research ethics or code of practice.		Training, workshop, role model, individual assignment and individual research projects

9. Program structures

Plan	Electives	Seminar (1 credit)	Thesis	Total
Plan 2.1	25	3	48	76
Plan 2.2	10	2	36	48

10. Contract Address:

Biotechnology Program,

School of Bioresources and Technology,

King Mongkut's University of Technology Thonburi,

49 Soi Thian Thale 25, Bang Khun Thian Chai Thale Road, Tha Kham,

Bangkhunthian, Bangkok, 10150

(https://biotech.kmutt.ac.th/)

The University Council granted programme permission at Meeting No.258 Date 3 Month February B.E 2021

(**Date created:** 11/1/2021)

KMUTT	**Biotechnology** **International Graduate program**	**Program Specification** **M.Sc. Biotechnology**

1. **Program title:** Master of Sciences Program in Biotechnology
2. **Awarding institution:** King Mongkut's University of Technology Thonburi
3. **Teaching Institution:** School of Bioresources and Technology

   King Mongkut's University of Technology Thonburi (Bangkhunthian)

4. **Contract Address:** Biotechnology Program,

   School of Bioresources and Technology,

   King Mongkut's University of Technology Thonburi,

   49 Soi Thian Thale 25, Bang Khun Thian Chai Thale

   Road, Tha Kham, Bangkhunthian, Bangkok, 10150

   (https://biotech.kmutt.ac.th/)

5. **Mode of study**: Full Time

   Language of study: English

6. **Admission Criteria:**

   Eligible applicant must have;

   1. Completed Bachelor's degree in Sciences or Engineering or related fields.
   2. Academic background and/or research experiences approved by the program committee

7. Professions after graduation:

1. Academics/researchers in biotechnology or bioscience in research institutes, and government and industrial sectors
2. Biotechnology related project analysts/ consultants
3. Entrepreneurs or biotechnology business owners

8. Program objective:

This master program is designed for students to gain knowledge in advanced biotechnology and develop skills in carrying out either independent and sustained research or applying knowledge to solve problems in biotechnology industry or entrepreneurship in biotechnology related business.

9. Program learning outcomes

Program Learning Outcomes		Teaching and Learning Methods
PLO1 : Students have ability to apply biotechnological concepts/knowledge to solve research problems/ industrial problems or develop entrepreneurship by having the following abilities:		
Sub PLO1A	Ability to explain principles of advanced biotechnology and related fields.	Lecture-based teaching that provides principle and applications aspects, seminar, tutorial, self-directed study and peer review sessions
Sub PLO1B	Ability to identify research problems and suggest solutions.	Directed independent learning activities, project-based and problem-based learning, special research project, thesis
Sub PLO1C	Ability to choose proper mathematical/ statistical/ computer tools together with the related information for effective analysis of research results.	Lecture-based teaching using a range of tools to solve 'real' and 'theoretical' case-studies and problem-based learning scenarios.
Sub PLO1D	Ability to solve research problems/ industrial problems or develop entrepreneurship.	Research proposal, experimental works, project presentation and report.
PLO 2 : Students have ability to communicate and exchange academic issues/finding/solution effectively in both oral and written presentations.		Seminar, group discussion, thesis progress report and defense, conference participations, manuscript writing, thesis writing
PLO 3: Students realize the value of continuous self-improvement and strive to achieve high quality work.		Guided, self-directed and student-centered learning, with increasing independence of approach, thought and process.
PLO 4: Students have ability to work in teams with both Thais and foreigners in either leadership or partner roles.		Laboratory works, group assignments
PLO 5: Students demonstrate an understanding of, and commitment to, research ethics or code of practice.		Training, workshop, role model, individual assignment and individual research projects

10. Program structures

Plan	Compulsory Courses	Elective Courses	Seminar	Thesis	Research project	Special project study	Total credits
Plan 1.2 (Thesis 12 credits)	10	12	2	12	-	-	36
Plan 1.2 (Thesis 24 credits)	10	-	2	24	-	-	36
Plan 2 (Biotechnology Practice program)	10	15	-	-	6	6	37
Plan 2 (Biotechnopreneur program)	7	16	1	-	6	6	36

Doctor of Philosophy Program in Postharvest Technology (International Program)

The learning outcomes of our global Ph.D. program are the driving force behind its development. Ph.D. students will be expected to complete a research-based dissertation on the individual topic related to postharvest loss and the preservation of the quality of agricultural products. Integrative learning, critical thinking, and creative problem-solving skills will be developed in candidates, and the graduates will adopt a lifelong learning perspective.

Career

Skillful researcher; R & D personnel;
Research planner; Lecturer;
Research manager; Government official

Quality assurance

Student recruitment

Application → Interview examination → English proficiency test

Dissertation completion guidelines

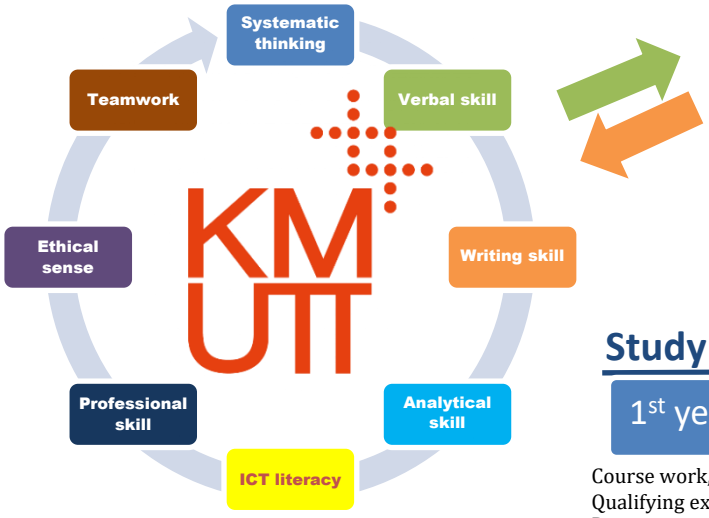
Qualifying examination → Proposal defense → Work progress → Comprehensive examination → Dissertation defense → Approved by the Faculty and University committee → Ph.D.

Program learning outcome (PLO)

LO1. Graduates demonstrate excellent corporate citizenship and social responsibility.

LO2. Graduates are capable of communicating the outcomes of research and technology to the public community.

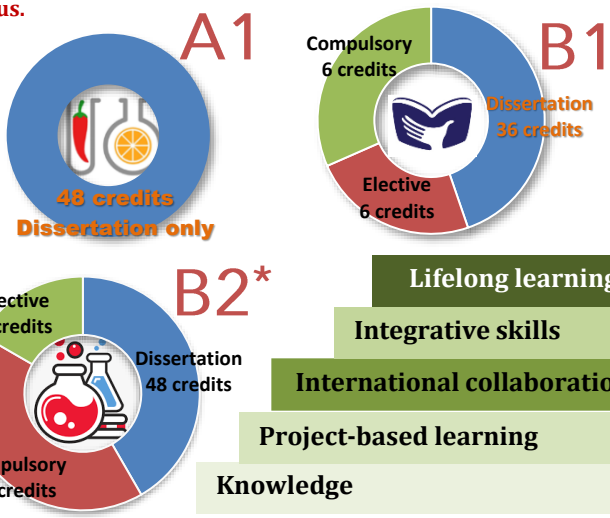
LO3. Graduates possess knowledge and skills in postharvest technology and are competent of analyzing, planning, and resolving problems through the integration of knowledge and the pursuit of lifelong learning.



Contact: pongphen.jit@kmutt.ac.th

Program specification

The University Council granted program permission at Meeting No. 259 on March, 3rd, 2020. **Academic activities take place at the King Mongkut University of Technology in Thonburi, "Bangkhuntien" campus.**



- Lifelong learning
- Integrative skills
- International collaboration
- Project-based learning
- Knowledge

Entry requirement:

1. M.Sc.(or B.Sc.*) students in Agricultural Science or its equivalent levels.
2. Proficiency in English (speaking, reading and writing)
3. Following qualification as rules and regulations of KMUTT.

***For outstanding bachelor students**

Student support

Academic:

- Learning infrastructure
- Internet/WiFi access
- Extra curriculum
- Student exchange
- Double degree program
- English improvement
- Advisory system

Research:

- High technology equipments
- Research internship program
- Postharvest Technology Innovation Center

Internationalization:

- English instructor
- International program
- Foreign student
- Foreign staff
- Visiting professor
- Student mobility
- Staff mobility

Academic staff

Our personnel all earned a Doctorate degree in a relevant field in order to build an interdisciplinary program. All personnel have regular opportunity to participate in national and international conferences, and to encourage research partnership with foreign research organizations.

Study plan for success

1st year	2nd year	3rd year	4th year
Course work, Seminar, Qualifying examination, Dissertation proposal	Seminar, Project research, Comprehensive examination, Dissertation viva defense		For the Fast-track (B2 plan) of bachelor students

Master of Science in Agri-Science and Technology (Postharvest) (International Program)

Our international M.Sc. programme is design based on learning outcome. The integrative learning, critical thinking and creative problem-solving skills in Agri-Science and Technology especially in postharvest are blended. Students will be trained in research, experimental design and application of appropriated technology to effectively reduce postharvest loss and maintain the quality of agricultural produces. According with international education standards, our programme is conducted in English to support the students who would like to pursue their higher education abroad or work in international company.

Career

Research scholar, researcher, agricultural and extension officer, quality assurance manager, fresh produce supplier, project analyst, entrepreneur, Small-Medium business owner (SME), etc.

Quality assurance

Student recruitment

Application → Interview examination → English proficiency test

Educational evaluation

Active participation | Practical | Report | Examination

Guidelines for Thesis completion

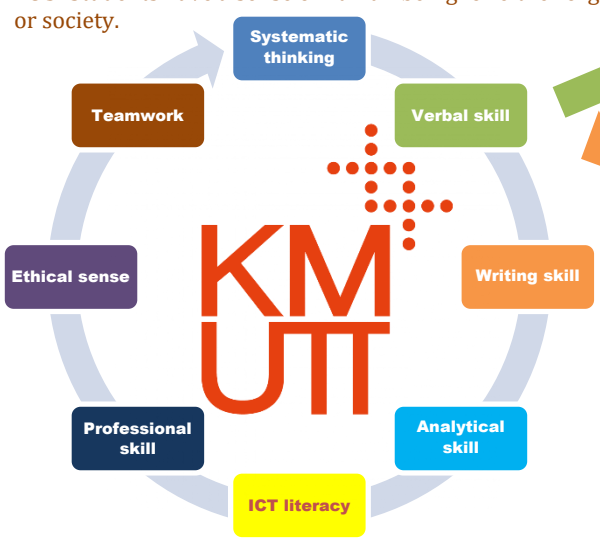
Proposal defensive → Semester progress → Comprehensive exam. → Thesis defensive → Approved by faculty committees

Expected learning outcome (LO)

LO1. Students will be a specialist in Postharvest Technology, having systematic and creative thinking. They also can identify and analyze research problems by integrated knowledge approaches and life-long learning.

LO2. Students have communicative competence and transfer technology to public using appropriate informative technology.

LO3. Students have a sense of human being for either organization or society.



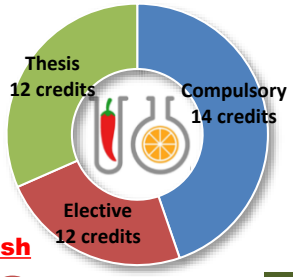
Contact: pongphen.jit@kmutt.ac.th

Program specification

The University Council granted programme permission at Meeting No. 224, Date 4th April 2017. Teaching take places at King Mongkut's University of Technology Thonburi, Bangkhuntien.

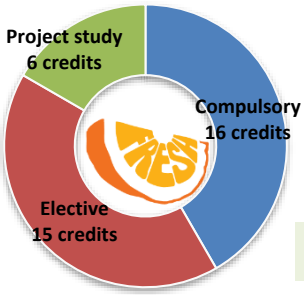
1

2



Language in class : English

3



Skills
Internship
Project based learning
Practical program
Knowledge

In order to meet the quality assurance, candidates who meet the following qualifications, will be interviewed by our staffs. The academic performance of a candidate will be evaluated in respect of the courses of study through the examinations, and participatory learning, as well as thesis defense examination.

Entry requirement:

1. Completion of B.Sc. in Agriculture, Science or its equivalent levels.
2. Relevant work experience (1 year at least).
3. Proficiency in English (speaking, reading and writing)
4. Following qualification as rules and regulations of KMUTT.

Student support

Academic
- Learning infrastructure
- Internet/WiFi
- Extra curriculum
- Student exchange
- Double degree program
- English improvement
- Advisory system

Research
- High technology equipment
- Research internship program
- Postharvest technology innovation center

internationalization
- English instructor
- International program
- Foreign student
- Foreign staff
- Visiting professor
- Student mobility
- Staff mobility

Academic staff development

Our staffs achieved an academic qualification in Doctoral degree abroad in a relevant subject in accordance with the purposes to create interdisciplinary program which draws from two or more academic disciplines that work together. Besides, all staffs have opportunities to gain knowledge through the participation in national and international conferences regularly and to promote the research collaboration with foreign research institutions.

Study plan for success

1st year → **2nd year** → **3rd year**

1st year: Course work, seminar, special problem, thesis proposal

2nd year: seminar, thesis research, comprehensive exam, thesis defensive exam

3rd year: Extra-curriculum: internship in foreign university

King Mongkut's University of Technology Thonburi

PhD in Bioinformatics & Systems Biology

Our international PhD programs are designed for students who desire focused training in the elements of biology, computer science, and information technology needed for a successful career in the exciting new discipline of Bioinformatics & Systems Biology. Students in our programs will receive comprehensive training in omics analysis, database design and management, software engineering and programming (including web-based development), simulation techniques and modeling, and data integration. Each student will apply their skills to a practical research project, where they will design and implement a solution to a real-world problem under the guidance of an experienced mentor.

PROGRAM LEARNING OUTCOMES

1) Synthesises new knowledge or creates innovative bioinformatics and systems biology approaches to solve biological problems

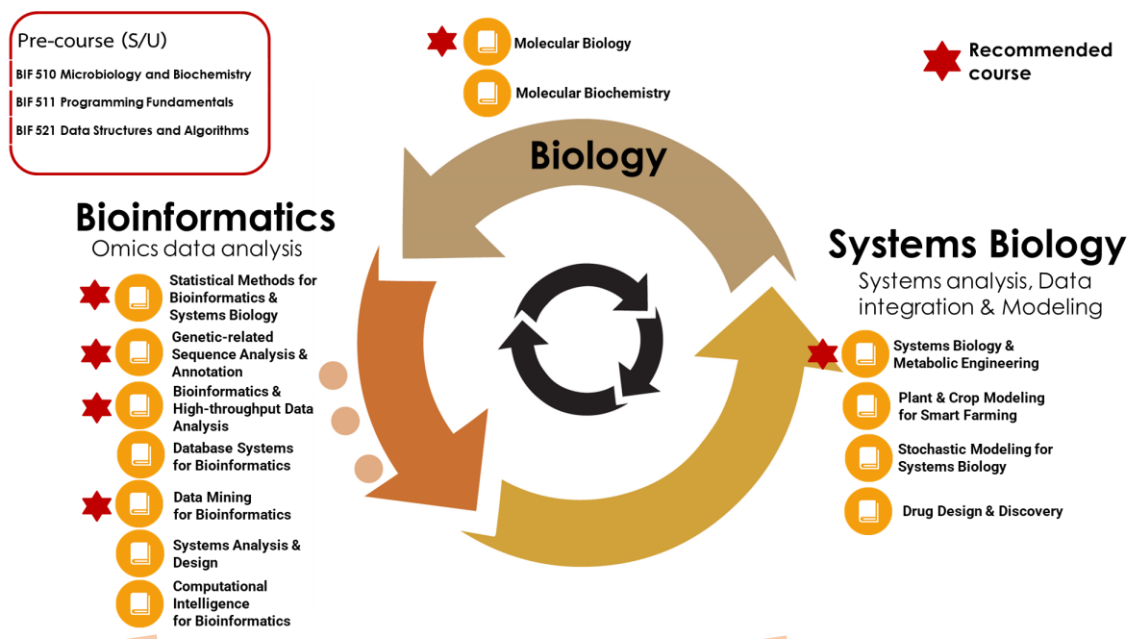
1A: Explains foundations of biology, computing statistics, and mathematics, relating to bioinformatics and systems biology.
1B: Analyses high-throughput biological data by integration of knowledge from different disciplines (biology, computing, statistics, and mathematics).
1C: Formulates research questions or hypotheses based on experience, expertise and literature with an understanding of the role of bioinformatics and systems biology in it.
1D: Synthesises new knowledge or creates innovation by designing effective bioinformatics and systems biology methods.

2) Communicates accurate information relating to bioinformatics and systems biology to diverse stakeholders in both oral and written formats through the publication standard

3) Coordinates team members from diverse disciplines to accomplish a common goal by sharing their own ideas, accepting others' opinion and leading a team

4) Values self and others with an understanding of ethical and social issues

CURRICULUM



STUDY PLAN

PhD Track 1.1	PhD Track 2.1	PhD Track 2.2
3 Seminar Courses (S/U)	3 Seminar Courses (3 credits)	6 Seminar Courses (6 credits)
–	3 Elective Courses (9 credits)	6 Elective Courses (18 credits)
Dissertation (48 credits)	Dissertation (36 credits)	Dissertation (48 credits)
TOTAL = 48 credits		TOTAL = 72 credits

STUDY @

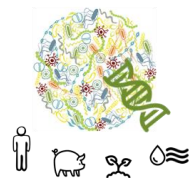
Schools of Bioresources and Technology (Bangkhuntein)

Schools of Information Technology (Bangmod)

Criteria for applicants

- A bachelor's or master's degree in biological sciences, computer science, computer engineering, medical sciences, chemistry, mathematics, statistics, or related disciplines.
- (Required) English test score (TOEFL iBT≥42, IELTS≥4.0 or TETET≥3.0)

Bioinformatics and Systems Biology Research → Deep-tech Applications

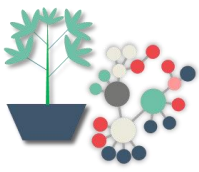


Microbiome & Metagenomic Analysis

Metagenomics is the study of genetic materials (of microbiome) derived directly from environmental samples using high-throughput sequencing technology. Microbiome is important for human, animal and plant health, including maintaining environmental balance.

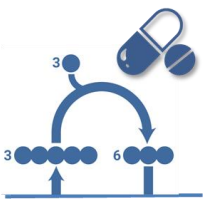
Medical Bioinformatics

Bioinformatics plays an important role to analyze biomedical data for studying human health and diseases e.g. cancer, Alzheimer, Autism, etc. The research leads identifications of biomarkers for diagnosis, prognosis and prediction of drug response.



Plant Systems Biology

Modeling a (crop) plant to predict the phenotype under the exposed condition. Omics data analysis, biological network reconstruction and mathematical modeling have been applied to study the dynamic regulation inside plant cells, aiming to precision science for tailor-made yield and quality of phyto-products.



Drug Design and Discovery

Bioinformatics & systems biology empower the research to gain insights into drug-receptor interactions, potential gene / protein targets, structures and functions of biomolecules, allowing the designing of new effective drugs and therapies while saving cost and time.

- Personalized medicine
- Personalized nutrigenomics
- *In silico* drug discovery and design
- Microbiome for heath & well-being
- Smart farming & breeding
- Synthetic biology for future food

International journal publications from our academic staffs & students

nature COMMUNICATIONS · nature microbiology · nature genetics · COMMUNICATIONS BIOLOGY · frontiers in Microbiology · SCIENTIFIC REPORTS · BMC Genomics · BMC Systems Biology · Nucleic Acids Research · Genes & Development · THE EMBO JOURNAL · PLoS one · Biotechnology Journal · Journal of Bacteriology · OMICS A Journal of Integrative Biology · BIOTECHNOLOGY and BIOENGINEERING · processes · PeerJ · genes · FEMS MICROBIOLOGY LETTERS

Contact us:
https://bioinformatics.kmutt.ac.th
facebook.com/bioinformatics.kmutt
ASK.BIF.KMUTT@gmail.com

Updated in 2021 (Improved PhD curriculum in 2021)

King Mongkut's University of Technology Thonburi

MSc in Bioinformatics & Systems Biology

Our international MSc programs are designed for students who desire focused training in the elements of biology, computer science, and information technology needed for a successful career in the exciting new discipline of Bioinformatics & Systems Biology. Students in our programs will receive comprehensive training in omics analysis, database design and management, software engineering and programming (including web-based development), simulation techniques and modeling, and data integration. Each student will apply their skills to a practical research project, where they will design and implement a solution to a real-world problem under the guidance of an experienced mentor.

PROGRAM LEARNING OUTCOMES

1) Solves biological problems using appropriate bioinformatics and systems biology approaches

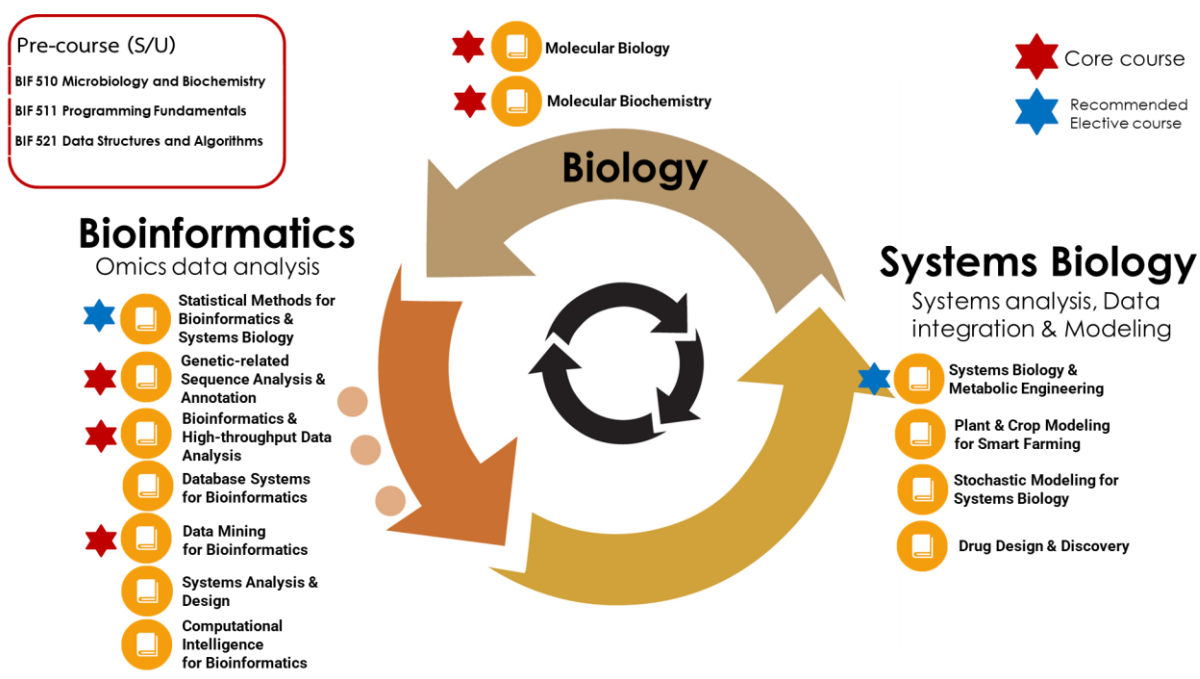
1A: Explains foundations of biology, computing, statistics, and mathematics relating to bioinformatics and systems biology.
1B: Analyzes high-throughput biological data by integration of knowledge from different disciplines (biology, computing, statistics, and mathematics)
1C: Formulates research questions or hypotheses based on guidelines with an understanding of the role of bioinformatics and systems biology in it.
1D: Solves research problems/tests hypothesis by selecting effective bioinformatics and systems biology methods.

2) Communicates accurate information relating to bioinformatics and systems biology to diverse stakeholders

3) Takes part competently in diverse teams to accomplish a common goal by sharing their own ideas and accepting others' opinions

4) Values self and others with an understanding of ethical and social issues

CURRICULUM



STUDY PLAN

MSc Track A (Coursework + Research Track)	MSc Track B (Coursework + Research + Internship Track)
1-Year Courseworks	1-Year Courseworks
1-Year Research	6-Month Special Research Study 6-Month Internship
Total Credits = 38	Total Credits = 38

STUDY @

Schools of Bioresources and Technology (Bangkhuntein)

Schools of Information Technology (Bangmod)

Criteria for applicants

- A bachelor's degree in biological sciences, computer science, computer engineering, medical sciences, chemistry, mathematics, statistics, or related disciplines.
- (Optional) English test score (TOEFL iBT, IELTS or TETET)

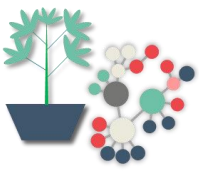
Bioinformatics and Systems Biology Research → Deep-tech Applications

Microbiome & Metagenomic Analysis

Metagenomics is the study of genetic materials (of microbiome) derived directly from environmental samples using high-throughput sequencing technology. Microbiome is important for human, animal and plant health, including maintaining environmental balance.

Medical Bioinformatics

Bioinformatics plays an important role to analyze biomedical data for studying human health and diseases e.g. cancer, Alzheimer, Autism, etc. The research leads identifications of biomarkers for diagnosis, prognosis and prediction of drug response.



Plant Systems Biology

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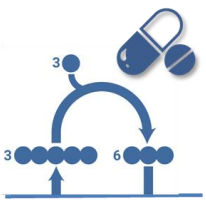


Drug Design and Discovery

Bioinformatics & systems biology empower the research to gain insights into drug-receptor interactions, potential gene / protein targets, structures and functions of biomolecules, allowing the designing of new effective drugs and therapies while saving cost and time.

- Personalized medicine
- Personalized nutrigenomics
- *In silico* drug discovery and design
- Microbiome for heath & well-being
- Smart farming & breeding
- Synthetic biology for future food

International journal publications from our academic staffs & students

nature COMMUNICATIONS · nature microbiology · nature genetics · COMMUNICATIONS BIOLOGY · frontiers in Microbiology · SCIENTIFIC REPORTS · BMC Genomics · BMC Systems Biology · Nucleic Acids Research · Genes & Development · THE EMBO JOURNAL · PLoS one · Biotechnology Journal · Journal of Bacteriology · OMICS A Journal of Integrative Biology · BIOTECHNOLOGY and BIOENGINEERING · processes · PeerJ · GCAT TACG GCAT · genes · FEMS MICROBIOLOGY LETTERS

Contact us:
https://bioinformatics.kmutt.ac.th
facebook.com/bioinformatics.kmutt
ASK.BIF.KMUTT@gmail.com

Updated in 2021 (Improved MSc curriculum in 2021)

1. **Program title:** Doctor of Philosophy Program in Natural Resource Management and Sustainability

2. **Awarding institution:** King Mongkut's University of Technology Thonburi

3. **Teaching Institution:** School of Bioresources and Technology

   King Mongkut's University of Technology Thonburi Bangkhunthian

4. **Mode of study**: Full Time

5. **Language of study:** English

6. **Admission Criteria:**

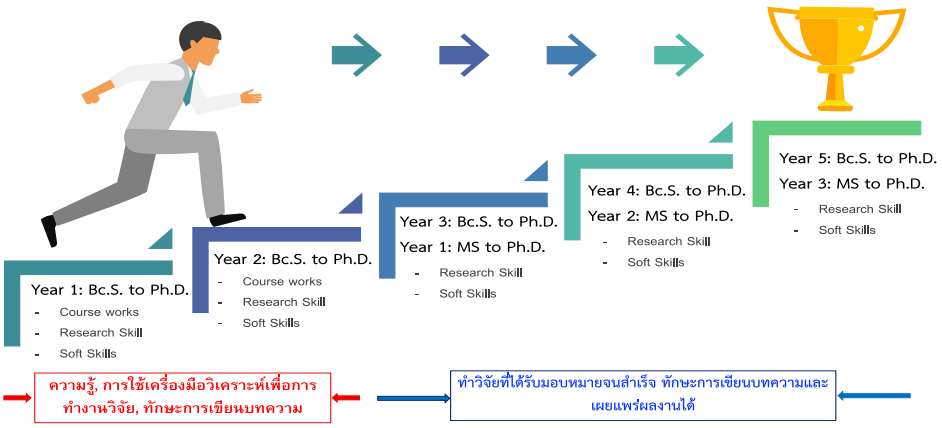
Plan	Eligible Applicants
Plan 1.1 (For Master's Degree Holder)	1. Complete Master of Science degree or other equivalent programs with a cumulative grade point average not less than 3.25 or 2. Have some research experiences or academic background approved by the program committee to be a candidate Ph.D. student.
Plan 2.2 (For Bachelor's Degree Holder)	1. Completed Bachelor of Science degree or other equivalent programs with honors or 2. Have research experiences and/or publications approved by the program committee to be a candidate Ph.D. student
Note: All applicants must submit standardized English Proficiency Test Score at the level indicated in the announcement on the KMUTT English Language Requirement for Doctoral Degree.	

7. **Program objective:**

1. To produce PhD candidates in Sustainable Resource Management and Sustainability with the knowledge and skills necessary to innovate, create new knowledge, or combine information from many fields in order to suggest fresh ideas for sustainable resource management. To be able to conduct research, communicate clearly, and apply knowledge of sustainable natural resource management to conservation management, resource use, or problem-solving that is relevant to the local environment. Including the capacity to cooperate with people locally, nationally, and internationally.

2. To establish high-quality research and development on natural resource management and sustainability at the national and international levels.

8. Program Learning Outcomes:



Program Learning Outcomes
PLO1: Develop core knowledge required in ecology and natural resource management
PLO2: Able to develop research skills necessary for solving problems in their area of interest
PLO3: Able to independently communicate both in verbal and written forms appropriate to their profession and community
PLO 4: Able to lead and work as a team that allow multi-disciplinary collaboration among local communities, government agencies or other private sectors with various cultures
PLO 5: Recognize the need for life-long learning and exhibit the skills necessary to acquire and organize new knowledge
PLO6: Demonstrate ethics, research integrity and responsibility to their professions and

9. Program structures

Plan	Core course	Electives	Thesis	Total
Plan 1.1	-	-	48	48
Plan 2.2	6	18	48	72

10. Contract Address:

Natural Resource Management and Sustainability Program,

School of Bioresources and Technology,

King Mongkut's University of Technology Thonburi,

49 Soi Thian Thale 25, Bang Khun Thian Chai Thale Road, Tha Kham,

Bangkhunthian, Bangkok, 10150 Tel: 024707558 / 024707705

The University Council granted programme permission at Meeting No.274 Date 8 Month June B.E 2022

(**Date created:** 23/6/2022)

King Mongkut's University of Technology Thonburi

Natural Resources Management Program

Master of Science (Natural Resource Management and Sustainability)
Master of Arts ((Natural Resource Management and Sustainability)

The decline and loss of natural systems is happening extremely quickly in many countries of the world, and the problem is particularly acute in SE Asia. The Natural Resource Management graduate program (NRM) at KMUTT, established in 1994, focuses on major issues and methods used in the study of the earth's environment. The program integrates concepts from many disciplines and is designed to broaden the background of students and to stimulate in-depth study of NRM issues of national and international interest to make them prepared for careers in NRM in the public and private sector.

We provide learning based on current problems in NRM and also focusing on community needs (problem-based & area-based learning). Students will be able to learn and conduct research in the field, including protected areas, rural and urban sites, Royal Project sites, or even private sectors using technology involving the environment and natural resources. Our research currently focuses on rural community development and outreach, waste management, and wildlife ecology and conservation. *The University Council granted programme permission at Meeting No.258 Date 3 Month February B.E 2021*

Program Specification

Program Learning Outcomes

- *Multidisciplinary Knowledge*
- *Communication skills*
- *Responsibility & Ethical sense*
- *Professional skills*
- *Research skills*
- *Leadership*

Criteria of applicants: *A bachelor's degree in Science, Arts, Social Sciences, Engineering or related disciplines*

Study Plan

1st year — Coursework, Seminar & Research proposal

2nd year — Research

PLAN A
- Courseworks — 26 cradits
- Thesis — 12 credits

PLAN B
- Courseworks — 32 cradits
- Independent Study — 6 credits

Quality Assurance

The curriculum has been evaluated every five years by combining comments from lecturers, students and stakeholders to review and revise the curriculum. Also, each course in the curriculum has been systematically evaluated.

PLAN
- *Prepare MKO 3&4 before semester starts*

DO
- *Teaching with Student-center*

CHECK
- *Prepare MKO 7 withinin 45 days after semester break*
- *Prepare MKO 5&6 within 15 days after semester break*
- *Evaluation*

ACT
- *Use evaluation result to revise MKO 3&4*

Student Supports (Facilities & Infrastructure)

Website : http://www.kmutt.ac.th/organization/bioresources/
http://cons-ecol-kmutt.weebly.com/

Tel : 02-470-7555, 02-470-7556

E-mail : sudarut.tri@kmutt.ac.th
george.and@kmutt.ac.th

KMUTT @ Bangkhuntien

BIOCHEMICAL TECHNOLOGY (BCT)

Graduate Programs (Ph.D & M.Sc.)

in

Division of Biochemical Technology
School of Bioresources and Technology

King Mongkut's University of Technology Thonburi (Bangkuntien), 49 Soi Thian Thale 25, Bang Khun Thian Chai Thale Road, Tha Kham, Bang Khun Thian, Bangkok 10150, Thailand

Doctor of Philosophy Program

Doctor of Philosophy Program in Biochemical Technology aims to create academics or researchers or innovators who can apply knowledge of biomolecules and technology and develop research capabilities to strengthen the country's manpower to target industries.

Ones who are capable to create innovations or technologies that can be applied in practice to support the mission of economic development from the biological resource base, BCG model. Develop research capabilities to strengthen the country and develop manpower to target industries.

Study program 1.1: Applicants who have completed a master's degree (48 credits)
Study program 2.2: Applicants who have completed a bachelor's degree (74 credits)

Master of Science Program

Master of Science program in Biochemical technology aims to produce
- graduates with ability to apply knowledge in biomolecules and technology for problem solving or process development.
- graduates who are good and competent, of high quality, with expertise that meets the needs of the labor market and the targeted industries of the country.

Ones who can create useful biochemical products or services to serve the economy and society of Thailand and drive the new economic "BCG Model"

Study program Kor 1: Thesis 36 credits
Study program Kor 2: Thesis 12 credits and course work 25 credits

RESEARCH LABORATORY

xCETMU
Excellent Center of Enzyme and Microbial Utilization

Enzyme Technology

- Novel lignocellulosic degrading bacteria from aerobic and anaerobic condition.
- Multienzyme complexes and multifunctional enzyme platform for bio-base industrial applications.
- Biological pretreatment and bio-conversion of agricultural wastes to high value-added products (rare sugar, prebiotic and bioactive compounds).

Contact: Assoc. Prof. Dr. Chakrit Tachaapaikoon (chakrit.tac@kmutt.ac.th)

LIPID TECH
LIPID TECHNOLOGY

Lipid Technology

- Extraction, purification, and synthesis of natural lipid bioactive compounds as functional ingredients for foods, cosmetics and supplements
- Analysis of fatty acid profiles and lipid profiles by GC and HPLC
- Biodiesel production and purification

Contact: Assoc. Prof. Dr. Kornkanok Aryusuk (kornkanok.ary@kmutt.ac.th)

CARB KMUTT
CABOHYDRATE TECHNOLOGY

Carbohydrate Technology

- Modification (chemical, physical, and enzymatic reactions) and characterization of starch and flour
- Development of value-added starch products
- Production of fibers, oligosaccharides and prebiotic starch

Contact: Dr. Ditpon Kotatha (ditpon.kot@kmutt.ac.th)
Dr. Yuree Wandee (yuree.wan@kmutt.ac.th)

PBF Phytobioactive and Flavor
PHYTOBIOACTIVE AND FLAVOR

Phytobioactive & Flavor

- Food and flavor technology (extraction, identification and application, flavor enhancer, encapsulation, restructured meat) Functional ingredients (bioactive compounds, protein hydrolysates, non-calorie sweeteners, prebiotics and probiotics)
- Intelligent packaging (biodegradable foam and freshness indicator film)
- Technologies for value added plan (elicitors, LED, intelligent greenhouse)

Contact: Assoc. Prof. Dr. Natta Laohakunjit (nutta.lao@kmutt.ac.th)

GENE TECHNOLOGY

Gene Technology

- Gene regulation, transcriptional regulators and pathways for controlling central metabolism, multi-drug resistance, stress response and ageing
- Yeasts as a model organism for bioactive compound/drug discovery and a production platform of high value biochemicals and advanced biofuels
- Biochemical product development for health and well-being, pharmaceuticals, cosmetics and biotech-industries

Contact: Assoc. Prof. Dr. Nitnipa Soontorngun (nitnipa.soo@kmutt.ac.th)

LigniTech
Lignin Technology Research Group
A Lignin Technology & Innovation Laboratory

Lignin Technology

- Development of lignin extraction process from plant biomass
- Lignin and biological activity
- Ligninolytic enzyme and microbes

Contact: Assoc. Assist. Prof. Paripok Phitsuwan (paripok.phi@kmutt.ac.th)