Topics by Research Programs for Master & PhD applicants

Research Program	Research Project	Supervising Academic Staff	E-Mail
1. Bioenergy Technology and Innovation	1.1 Development of small/medium scale biomass gasification for heat and power production 1.2 Production of High efficiency Biogas and its Application 1.3 Development of Biodiesel Process for ASEAN Industry 1.4 High Quality Fuel from Municipal Solid Waste 1.5 Integrating Process of Biomass Conversion to Fuel and its High Value Chemicals 1.6 Development of torrefaction process for Thai biomass	Assoc. Prof. Dr. Suneerat Fukuda Assoc. Prof. Dr. Sumate Chaiprapat Assoc. Prof. Dr. Chakrit Tongurai Dr. Yossapong Laoonual Prof. Dr. Navadol Laosiripojana Assoc. Prof. Dr. Nakorn Worasuwannarak	suneerat.pip@kmutt.ac.th sumate.ch@psu.ac.th chakrit.t@psu. ac.th yossapong.lao@kmutt.ac.th navadol@jgsee.kmutt.ac.th nakorn.wor@kmutt.ac.th
2. Energy and Environmental Technology for sustainable urban building development towards net zero energy building	2.1 Development and support on the implementation of energy efficiency code and carbon rating scheme for commercial buildings and residential houses 2.2 Solar Cooling and Dehumidification and Dedicated Outside Air System 2.3 Development of Technologies for Daylighting through Window and Roof Aperture for Commercial and Residential Buildings in Thailand	Prof. Dr. Surapong Chirarattananon Asst. Prof. Dr. Pattana Rakkwamsuk Asst. Prof. Dr. Pipat Chaiwiwatworakul	surapong_chira@yahoo.com pattana.rug@kmutt.ac.th pipatc@gmail.com
3. Integrate Energy and Environment for sustainable green urban approach	3.1 Development of Green and Low Carbon City 3.2 Sustainable Integrative Indicator for and Urban Area 3.3 Investigation of Weather and Climatic Conditions, Air-Borne Constituents, Land Cover Change, and Their Relationships for Selected Large Urban Areas.	Assoc. Prof. Dr. Sate Sampattagul Prof. Dr. Shabbir Gheewala Assoc. Prof. Dr. Kasemsan Manomaiphiboon	sate@eng.cmu.ac.th shabbirg@hotmail.com kasemsanm@hotmail.com

4. Solid Waste Management for Sustainable Energy and Environment	4.1 Development of Pilot Plant of Biogas Production without Organic Waste Separation Process	Assoc. Prof. Dr. Sumate Chaiprapat	sumate.ch@psu.ac.th
	4.2 Application of Serial-self Turning Composting Technology in Local Community	Assoc. Prof. Dr. Taweep Chaisomphob	taweep@siit.tu.ac.th
	4.3 Study on the Utilization of Municipal Solid Waste for Biogas, Compost, and RDF and the Assessment of Environmental Impacts from the Processes	Assoc.Prof.Dr. Sandhya Babel	sandhya@siit.tu.ac.th
	4.4 Development of Forecasting Model of MSW and its Potential of Utilization in Thailand	Assoc. Prof. Dr. Sirintornthep Towprayoon	sirin.jgsee@gmail.com
	4.5 Monitoring and Management of Pollution from Waste to Energy System	Dr. Awassada Phongphiphat	awassada.pho@kmutt.ac.th
	4.6 Environmental and economic impacts of bioplastics on MSW management system in Thailand	Assoc.Prof.Dr. Sirintornthep Towprayoon and Dr.Awassada Phongphiphat	awassada.pho@kmutt.ac.th
	4.7 Forecasting the changes in MSW-to-energy systems in Thailand as a result of waste recycling and circular economy	Assoc.Prof.Dr. Sirintornthep Towprayoon and Dr.Awassada Phongphiphat	awassada.pho@kmutt.ac.th
	4.8 Material flow analysis of recyclable plastic waste and non-recyclable plastic waste in Thailand	Assoc.Prof.Dr. Sirintornthep Towprayoon and Dr.Awassada Phongphiphat	awassada.pho@kmutt.ac.th
	4.9 Management and energetic utilization technologies for non-recyclable plastic waste	Assoc.Prof.Dr. Sirintornthep Towprayoon and Dr.Awassada Phongphiphat	awassada.pho@kmutt.ac.th
	4.10 Conversion of market waste to low-grade refuse-derived fuel using biodrying		
	4.11 Solid waste treatment technologies : waste/RDF analysis and characterization, resource flow analysis, waste-to-energy process optimization, pollution pathways, carbon capture storage and utilization, microplastic.	Assoc.Prof.Dr. Sirintornthep Towprayoon and Dr.Awassada Phongphiphat	awassada.pho@kmutt.ac.th
	4.12 Climate change : Assessment of vulnerability and resilience, environmental-economical modelling, adaptation plan, net-zero GHG emission targets	Assoc.Prof.Dr. Sirintornthep Towprayoon and Dr.Awassada Phongphiphat	awassada.pho@kmutt.ac.th
	4.13 Material flow analysis and economic assessment of medium-scale waste separation process in Thailand	Asst.Prof.Dr. Komsilp Wangyao	komsilp@gmail.com
	4.14 Assessing the socio-economic of landfill mining practice in Thailand	Asst.Prof.Dr. Komsilp Wangyao	komsilp@gmail.com

	4.15 An analysis of the GHG reduction gap in the waste sector conducted by local government organizations in Thailand 4.16 Improve MSW Management to provide industrial standard RDF for Import Purpose 4.17 Development of Market Waste Biodrying for Refuse Derived Fuel Production 4.18 Co-biodrying of Wood Chop and Wet-RDF3 4.19 Determination of Thermal Conductivity of Solid Biomass	Asst.Prof.Dr. Komsilp Wangyao Asst.Prof.Dr. Komsilp Wangyao Asst.Prof.Dr. Komsilp Wangyao Asst.Prof.Dr. Komsilp Wangyao Asst.Prof.Dr. Suthum Patumsawad	komsilp@gmail.com komsilp@gmail.com komsilp@gmail.com komsilp@gmail.com stt@kmutnb.ac.th
5. Climate Change Technology and Innovation	5.1 Development of High-resolution Gridded Climatological Database and Derived Products for Thailand 5.2 Development of Technology and Innovation for Economic Plant to come with Climate Change and Climate Variable 5.3 Development of system analysis framework to identify risk area to air pollution due to tropospheric ozone and particulate matter (PM2.5 and PM10) for Thailand 5.4 Impacts of climate extreme on evapotranspiration and carbon exchanges of forest and agricultural ecosystems	Assoc. Prof. Dr. Usa Humphries Assoc. Prof. Dr. Amnat Chidthaisong Assoc. Prof. Dr. Savitri Garivait Dr. Chaiwat Ekkawatpanit	usa.wan@kmutt.ac.th amnat.chi@kmutt.ac.th savitri.gar@kmutt.ac.th chaiwat.ekk@kmutt.ac.th