International Undergraduate Program

Faculty of Engineering, Kasetsart University

Second Semester

Course ID	Course Name	Credit	Date / Time
01206221	Applied Probability & Statistics for Eng.	3	Tue 13-16

Course Description

Probability, expected value and common probability distributions, sampling distributions, statistical inference for one-and-two sample problems, regression analysis, analysis of variance and their applications to industrial systems.

International Undergraduate Program

Faculty of Engineering, Kasetsart University

Second Semester

Course ID	Course Name	Credit	Date / Time
01206222	Applied Math for IE Eng.	3	Thu 13-16

Course Description

Mathematical model building, numerical linear algebra, fourier series and transform, closed form and numerical solutions for ordinary and partial differential equations, analysis of linear system under random parameters.

International Undergraduate Program

Faculty of Engineering, Kasetsart University

Second Semester

Course ID	Course Name	Credit	Date / Time
01206223	Introduction to Experimental Design	3	Tue 13–16

Course Description

Design of experiment, analysis of variance, multiple linear regression analysis, factorial experiment, fractional factorial experiment.

International Undergraduate Program

Faculty of Engineering, Kasetsart University

Second Semester

Course ID	Course Name	Credit	Date / Time
01206251	Engineering Economy	3	Fri 9-12

Course Description

Analysis of economic aspects for engineering decisions under certainty and uncertainty, methods of measurement of equivalent value based on total investment analysis and incremental investment analysis, applications of replacement analysis, break-even analysis and government project analysis including effects of income taxes.

International Undergraduate Program

Faculty of Engineering, Kasetsart University

Second Semester

Course ID	Course Name	Credit	Date / Time
01206272	Industrial Safety	3	Mon 13-16

Course Description

Industrial safety laws, accident prevention techniques, relationship of safety designs to production efficiency, risk analysis, principles of industrial environmental control, safety management system and industrial psychology and first aid techniques.

International Undergraduate Program

Faculty of Engineering, Kasetsart University

Second Semester

Course ID	Course Name	Credit	Date / Time
01206311	Manufacturing Processes I	3	Contact Professor

Course Description

Fundamental of manufacturing processes: foundry, forming, welding, powder metallurgy, hot and cold forming,cutting,turning, shaping, drilling, milling, surface finishing, gear manufacturing, rapid prototyping. Measurement and inspection.

International Undergraduate Program

Faculty of Engineering, Kasetsart University

Second Semester

Course ID	Course Name	Credit	Date / Time
01206312	Industrial Study	1	(Lab) Wed 13-16

Course Description

Industrial plant visits, data collection and analysis for problem solving, and reporting with presentations.

Second Semester

Course ID	Course Name	Credit	Date / Time
01206322	Quality Control	3	Thu 9-12

Course Description

Techniques for solving deterministic problems: mathematical modeling, linear programming and dual problems, network models, inventory models, transportation and transshipment problems, assignment problems. Techniques for solving non-deterministic problems: decision making under uncertainty and risk, Games theory, critical path method for project management.

Second Semester

Course ID	Course Name	Credit	Date / Time
01206323	Operation Research for EngineeringII	3	Thu 13-16

Course Description

Techniques for solving non-linear programming problems: binary programming, integer programming, geometric programming, dynamic programming, branch and bound technique. Queuing theory. Techniques for solving probabilistic problems: Markov chain and simulation model.

Second Semester

Course ID	Course Name	Credit	Date / Time
01206342	Production Planning and Control	3	

Course Description

Production planning and control system, forecasting techniques, inventory management, cost and profit analysis for decision making, production scheduling, production control, modern techniques in production planning and control.

International Undergraduate Program

Faculty of Engineering, Kasetsart University

Second Semester

Course ID	Course Name	Credit	Date / Time
01206343	Industrial Plant Design	3	Wed 9-12

Course Description

Industrial plant design and layout techniques: plant location, product analysis, factors and causes influencing new layout; data collection and analysis; developing and presentation of layout considering employees, equipment, supporting system, material handling system, storage, and environmental surrounding.

International Undergraduate Program

Faculty of Engineering, Kasetsart University

Second Semester

Course ID	Course Name	Credit	Date / Time
01206361	Computer Application for IE	3	Mon 13-16

Course Description

Problems in industrial engineering, analysis and solving all or parts of the problems by applications of computer programs available, presentation by oral and written reports.

International Undergraduate Program

Faculty of Engineering, Kasetsart University

Second Semester

Course ID	Course Name	Credit	Date / Time
01206362	Automation Production System	3	Tue 9–12

Course Description

Structure and work principle of measuring instrument for pressure, flow rate, and temperature. Pneumatic and electrical pneumatic systems. Hydraulic and electrical hydraulic systems. Programming of Programmable Logic Controller for controlling electrical pneumatic and electrical hydraulic systems.CNC machines.