



Bachelor of Science in Business Information Technology

(International Program)

(2016 New Program)

Faculty of Information Technology

King Mongkut's Institute of Technology Ladkrabang

**Bachelor of Science in Business Information Technology
(International Program)
(2016 New Program)**

Name of Institution King Mongkut's Institute of Technology Ladkrabang
Faculty / Campus /College Faculty of Information Technology
Department Information Technology

Part 1: General Information

1. Program title : Bachelor of Science in Business Information Technology
(International Program)
2. Degree and field title
Full name : Bachelor of Science (Business Information Technology)
Abbreviation : B.Sc. (Business Information Technology)
3. Major or Minor subjects (if any)
None
4. Total credits
126 credits
5. Type of the Program
 - 5.1 Type
 4 year Bachelor's Degree Program
 - 5.2 Program type
 Academic Bachelor's Degree Program
 Academic Bachelor's Degree Program
 Advanced Academic Bachelor's Degree Program
 - 5.3 Language
 English
 - 5.4 Admission
 Both Thai and Foreign students
 - 5.5 Collaboration with other institutes
 Program issued specifically by KMITL
 - 5.6 Degree Conferment
 One Degree

6. Status of the Program and Consideration for the Authorization/Agreement

- New Program \Rightarrow Course begins on.....August.....2017.....
- The program has been endorsed by the Academic Committee of KMITL in its meeting No.8...../.....2016.... on.....23.....August.....2016.....
- The program has been endorsed by the KMITL Council in its meeting No.9...../.....2016..... on.....Wednesday.....14.....September.....2016.....

7. Expected Date for Thai Qualifications Register (TQR)

Academic Year 2019

6. Career Paths

The graduates from this program will be full of the knowledge and capability for working in a business information technology field and meet the demand of both government agencies and private businesses labor market. The possible career path for graduates are as follow:

- (1) Business Information System Analyst and Designer
- (2) Information System Developer
- (3) Business Analyst
- (4) Emerging Entrepreneur
- (5) Information Technology Project Manager
- (6) Professional in Information Technology Management
- (7) Professional in Information Technology Application
- (8) Information Technology Project Integrator
- (9) Information Technology Researcher

9. Instructor Details

Name-Surname (Academic Position)	Qualification (Field of study) Year of Graduation	University
1. Asst. Prof. Dr. Boonprasert Surakratanasakul	B.Sc. Computer Science, 1998 M.Sc. Computer Science, 2003 Ph.D. (Science and Technology), 2014	Silpakorn University Thammasat University Tokai University, Japan
2. Dr. Nol Premasathian	B.Eng. Computer Engineering, 1995 M.S. (Computer Engineering), 1998 Ph.D. (Computer Engineering), 2002	Chulalongkorn University, 1995 University of Southern California, USA University of Louisiana, USA
3. Dr. Lapas Pradittasnee	B.Eng. Electrical Engineering, 1998 M.Eng. (Computer and Telecommunication Engineering), 2002 Ph.D. (Information Technology), 2014	Thammasat University University of Wollongong, Australia Queensland University of Technology
4. Dr. Supawan Tassanaprasert	B.Eng. Electrical Engineering, 2000 M.Eng Information Engineering, 2004 Ph.D. (Electrical Engineering), 2008	Kasetsart University King Mongkut's Institute Technology Ladkrabang University of Electro- Communication, Japan
5. Dr. Bundit Thanasopon	B.Eng. Computer Engineering, 2007 M.Sc. (Knowledge and Information Systems Management), 2011 Ph.D. (Management), 2015	Chulalongkorn University University of Southampton, UK University of Hull, UK

10. Location of Study

King Mongkut's Institute Technology Ladkrabang

11. External Situation or Development Needed to be Considered for the Planning of the Program

11.1 Economic Situation/Development

Currently, it is acknowledged that information technology plays a crucial role in supporting businesses. These improvements will satisfy the demands of consumer and be response to the market's direction which is transforming into the digital market. For instance, products and services can be directly offered to consumers. Likewise, Thailand has implemented a policy on the development of Digital Economy (DE) in order to drive the progression of the country.

11.2 Social and Cultural Situation/Development

Effective use of information technology apart from the ability in information technology understanding business systems is also important. Therefore, it is necessary to have personnel who have knowledge and expertise in business information technology and can apply their skill to create internationally renowned outcomes. Thus, they will play a significant role in propelling Thailand's Information and Communication Technology Policy Framework B.E. 2554-2563. Additionally, the business information technology graduates must be proficient in foreign languages in order to communicate with foreigner both in ASEAN and oversea.

12. Effects from 11.1 and 11.2 on the Development of the Program and the Relation to the Mission of the Institute

12.1 Program Development

Faculty of Information Technology, King Mongkut's Institute of Technology Ladkrabang has long experience and expertise to prepare students to be capable of information technology and management. The faculty has professional instructors graduated from foreign countries. The faculty realizes on the importance and the necessity of personnel who have not only knowledge and expertise but also understanding in business systems as well as skills and readiness in foreign languages to be able to communicate with foreigners. Therefore, students can respond to the needs of the business sector that are adapting to the rapid change of direction and innovation, including social and cultural aspects that need to support the propelling of the Information and Communication Technology Policy Framework B.E. 2554-2563 in Thailand.

12.2 Relation to the Mission of the Institute

King Mongkut's Institute of Technology Ladkrabang has an important mission in Higher Education and encouraging facilitates research especially related to science and technology. Faculty of Information Technology also has a mission to organized teaching and research in information technology and responsible directly for society in terms of developing the country's information technology personnel to be accepted internationally. Also, the faculty aims to encourage the development of technology and related innovations as well as aware of the necessity of using technology regarding social responsibility.

Curriculum

Curriculum		
Total Credits	126	credits
Curriculum Structure		
A. General Education Course	30	credits
Language Course	12	credits
Sciences and Mathematics Course	6	credits
Humanities Course	6	credits
Social Sciences Course	6	credits
B. Specific Course	90	credits
Core Course	9	credits
– Mathematics and Statistic	6	credits
– Fundamental of Information Technology	3	credits
Specialized Education Course	75	credits
– Organizational issues and Information System	21	credits
– Technology for Application	30	credits
– Technology and Software Method	18	credits
– System Infrastructure	6	credits
Elective Course in Information Technology	6	credits
Alternative Education	6	credits
– Project Course		
– Cooperative Education Course		
– Oversea Training or Internship		
C. Free Elective Courses	6	credits

*Students may choose to enroll in Cooperative Education Course with 6 credits throughout the duration of the training (1 semester), which can be substituted for PROJECT 1 and PROJECT 2 of each field in Specialized Education Course totaling 6 credits as approved by the faculty. For Cooperative Education Course, students can choose Cooperative Education or Oversea Cooperative Education.

For students in advanced bachelor's degree program

This course is under the Regulations of King Mongkut's Institute of Technology Ladkrabang about Advanced Bachelor's Degree program 2010 (APPENDIX B), the Regulations of King Mongkut's Institute of Technology Ladkrabang regarding Advanced Bachelor's Degree Management 2011 (Version 2) (Appendix C) or the Regulation of the Institute that is an revised or replaced regulation of the above regulations and announcements of academic section

Subject in the curriculum

A. General Education Course 30 credits

1) Language Course 12 credits

Code	Subject	Credits (Lecture-Practice-Self-study)
06036081	FOUNDATION ENGLISH 1	3(3-0-6)
06036082	FOUNDATION ENGLISH 2	3(3-0-6)
06036083	DEVELOPMENT OF READING AND WRITING SKILLS IN ENGLISH	3(3-0-6)
06036084	ENGLISH FOR PROFESSIONAL PRESENTATION	3(3-0-6)

2) Sciences and Mathematics Course 6 credits

Code	Subject	Credits (Lecture-Practice-Self-study)
06036085	INTRODUCTION TO MATHEMATICAL ECONOMICS	3(3-0-6)
06036086	PHILOSOPHY OF SCIENCE	3(3-0-6)

3) Humanities Course 6 credits

Code	Subject	Credits (Lecture-Practice-Self-study)
06036087	REPORT WRITING	3(3-0-6)
06036088	CREATIVE THINKING	3(3-0-6)

4) Social Sciences Course 6 credits

Code	Subject	Credits (Lecture-Practice-Self-study)
06036089	ENTREPRENEURSHIP	3(3-0-6)
06036090	GENERAL BUSINESS	3(3-0-6)

B. Specific Requirement Course **90 credits**

1) Core Course 9 credits

Code	Subject	Credits (Lecture-Practice-Self-study)
06036001	INFORMATION TECHNOLOGY FUNDAMENTALS	3(2-2-5)
06036002	MATHEMATICS FOR INFORMATION TECHNOLOGY	3(3-0-6)
06036003	PROBABILITY AND STATISTICS	3(3-0-6)

2) Specialized Education Course 75 credits

– Organizational issues and Information System 21 credits

Code	Subject	Credits (Lecture-Practice-Self-study)
06036004	MANAGEMENT AND ORGANIZATIONS	3(3-0-6)
06036005	FINANCIAL ACCOUNTING	3(3-0-6)
06036006	MANAGEMENT INFORMATION SYSTEMS	3(3-0-6)
06036007	INFORMATION TECHNOLOGY PROJECT MANAGEMENT	3(3-0-6)
06036008	DIGITAL BUSINESS TECHNOLOGY	3(3-0-6)
06036009	ECONOMICS OF INFORMATION TECHNOLOGY	3(3-0-6)
06036010	BUSINESS PROCESSES AND ENTERPRISE RESOURCE PLANNING	3(2-2-5)

– Technology for Application 30 credits

Code	Subject	Credits (Lecture-Practice-Self-study)
06036011	DATABASE SYSTEM CONCEPTS	3(2-2-5)
06036012	HUMAN INTERFACE DESIGN	3(3-0-6)
06036013	WEB AND MULTIMEDIA TECHNOLOGY	3(2-2-5)
06036014	INFORMATION SYSTEM SECURITY AND IT LAWS	3(3-0-6)
06036015	DIGITAL MARKETING	3(2-2-5)
06036016	BUSINESS INTELLIGENCE & BIG DATA	3(3-0-6)
06036017	ENTERPRISE SYSTEMS	3(3-0-6)
06036018	SOCIAL MEDIA AND SOCIAL NETWORK	3(3-0-6)
06036019	PROJECT 1	3(0-9-0)
06036020	PROJECT 2	3(0-9-0)

– Technology and Software Method 18 credits

Code	Subject	Credits (Lecture-Practice-Self-study)
06036021	PROBLEM SOLVING IN INFORMATION TECHNOLOGY	3(2-2-5)
06036022	COMPUTER PROGRAMMING	3(2-2-5)
06036023	BASIC DATA STRUCTURES AND ALGORITHMS	3(3-0-6)
06036024	BUSINESS INFORMATION SYSTEM ANALYSIS AND DESIGN	3(3-0-6)
06036025	OBJECT ORIENTED TECHNOLOGY	3(3-0-6)
06036026	MOBILE APPLICATION DEVELOPMENT	3(2-2-5)

– System Infrastructure 6 credits

Code	Subject	Credits (Lecture-Practice-Self-study)
06036027	COMPUTER SYSTEMS ORGANIZATION AND OPERATING SYSTEM	3(3-0-6)
06036028	INTRODUCTION TO COMPUTER NETWORKS	3(3-0-6)

3) Elective Course in Information Technology 6 credits

Choose subjects as follows:

Code	Subject	Credits (Lecture-Practice-Self-study)
06036029	REQUIREMENT ENGINEERING	3(3-0-6)
06036030	ADVANCE DATABASE SYSTEMS	3(3-0-6)
06036031	DATABASE SYSTEM MAINTENANCE AND ADMINISTRATION	3(2-2-5)
06036032	COMPUTER GRAPHICS AND ANIMATION	3(2-2-5)
06036033	SUPPLY CHAIN MANAGEMENT AND LOGISTICS	3(3-0-6)
06036034	KNOWLEDGE MANAGEMENT	3(3-0-6)
06036035	INTRODUCTION TO CLOUD TECHNOLOGY	3(3-0-6)
06036036	OPERATIONS MANAGEMENT	3(3-0-6)
06036037	DECISION SUPPORT SYSTEMS	3(3-0-6)
06036038	BUSINESS PERFORMANCE MANAGEMENT	3(3-0-6)
06036039	MACHINE LEARNING	3(3-0-6)
06036040	INFORMATION TECHNOLOGY GOVERNANCE	3(3-0-6)
06036041	INNOVATION AND CHANGE MANAGEMENT	3(3-0-6)
06036042	SPECIAL TOPICS IN INFORMATION TECHNOLOGY 1	3(3-0-6)
06036043	SPECIAL TOPICS IN INFORMATION TECHNOLOGY 2	3(3-0-6)
06036044	SPECIAL WORKSHOP IN INFORMATION TECHNOLOGY 1	3(2-2-5)
06036045	SPECIAL WORKSHOP IN INFORMATION TECHNOLOGY 2	3(2-2-5)

C. Free Elective Courses **6 credits**

Students must complete at least 6 additional credits from any courses offered by the institution.

D. Cooperative Education Course **6 credits**

Students may choose to enroll in the following Cooperative Education Course throughout the duration of training (1 semester), which can be substituted for PROJECT 1 and PROJECT 2 as approved by the faculty.

Code	Subject	Credits (Lecture-Practice-Self-study)
06036046	COOPERATIVE EDUCATION	6(0-35-0)
06036047	OVERSEA COOPERATIVE EDUCATION	6(0-35-0)

Note: Students must receive at least 30 hours of preparation training before beginning the Cooperative Education.

Study Plan
Study Plan without Cooperative Education

1st Year, semester 1

Code	Subject	Amount of credits
06036001	INFORMATION TECHNOLOGY FUNDAMENTALS	3(2-2-5)
06036021	PROBLEM SOLVING IN INFORMATION TECHNOLOGY	3(2-2-5)
06036027	COMPUTER SYSTEMS ORGANIZATION AND OPERATING SYSTEM	3(3-0-6)
06036081	FOUNDATION ENGLISH 1	3(3-0-6)
06036083	DEVELOPMENT OF READING AND WRITING SKILL IN ENGLISH	3(3-0-6)
06036085	INTRODUCTION TO MATHEMATICAL ECONOMICS	3(3-0-6)
Total of credits		18

1st Year, semester 2

Code	Subject	Amount of credits
06036002	MATHEMATICS FOR INFORMATION TECHNOLOGY	3(3-0-6)
06036004	MANAGEMENT AND ORGANIZATIONS	3(3-0-6)
06036022	COMPUTER PROGRAMMING	3(2-2-5)
06036082	FOUNDATION ENGLISH 2	3(3-0-6)
06036084	ENGLISH FOR PROFESSIONAL PRESENTATION	3(3-0-6)
06036090	GENERAL BUSINESS	3(3-0-6)
Total of credits		18

2nd Year, semester 1

Code	Subject	Amount of credits
06036003	PROBABILITY AND STATISTICS	3(3-0-6)
06036005	FINANCIAL ACCOUNTING	3(3-0-6)
06036023	BASIC DATA STRUCTURES AND ALGORITHMS	3(3-0-6)
06036028	INTRODUCTION TO COMPUTER NETWORKS	3(3-0-6)
06036087	REPORT WRITING	3(3-0-6)
06036089	ENTREPRENEURSHIP	3(3-0-6)
Total of credits		18

2nd Year, semester 2

Code	Subject	Amount of credits
06036006	MANAGEMENT INFORMATION SYSTEMS	3(3-0-6)
06036008	DIGITAL BUSINESS TECHNOLOGY	3(3-0-6)
06036011	DATABASE SYSTEM CONCEPTS	3(2-2-5)
06036012	HUMAN INTERFACE DESIGN	3(3-0-6)
06036013	WEB AND MULTIMEDIA TECHNOLOGY	3(2-2-5)
06036024	BUSINESS INFORMATION SYSTEM ANALYSIS AND DESIGN	3(3-0-6)
Total of credits		18

3rd Year, semester 1

Code	Subject	Amount of credits
06036007	INFORMATION TECHNOLOGY PROJECT MANAGEMENT	3(3-0-6)
06036009	ECONOMICS OF INFORMATION TECHNOLOGY	3(3-0-6)
06036010	BUSINESS PROCESSES AND ENTERPRISE RESOURCE PLANNING	3(2-2-5)
06036014	INFORMATION SYSTEM SECURITY AND IT LAWS	3(3-0-6)
06036025	OBJECT ORIENTED TECHNOLOGY	3(3-0-6)
060360xx	ELECTIVE COURSE IN INFORMATION TECHNOLOGY 1	3(3-0-6) or 3(2-2-5)
Total of credits		18

3rd Year, semester 2

Code	Subject	Amount of credits
06036015	DIGITAL MARKETING	3(2-2-5)
06036016	BUSINESS INTELLIGENCE AND BIG DATA	3(3-0-6)
06036017	ENTERPRISE SYSTEMS	3(3-0-6)
06036018	SOCIAL MEDIA AND SOCIAL NETWORK	3(3-0-6)
06036026	MOBILE APPLICATION DEVELOPMENT	3(2-2-5)
060360xx	ELECTIVE COURSE IN INFORMATION TECHNOLOGY 2	3(3-0-6) or 3(2-2-5)
Total of credits		18

4th Year, semester 1

Code	Subject	Amount of credits
06036019	PROJECT 1	3(0-9-0)
06036086	PHILOSOPHY OF SCIENCE	3(3-0-6)
xxxxxxxx	FREE ELECTIVE COURSE 1	3(3-0-6)
Total of credits		9

4th Year, semester 2

Code	Subject	Amount of credits
06036020	PROJECT 2	3(0-9-0)
06036088	CREATIVE THINKING	3(3-0-6)
xxxxxxxx	FREE ELECTIVE COURSE 2	3(3-0-6)
Total of credits		9

Total credits of the program 126 credits

Study Plan with Cooperative Education

1st Year, semester 1

Code	Subject	Amount of credits
06036001	INFORMATION TECHNOLOGY FUNDAMENTALS	3(2-2-5)
06036021	PROBLEM SOLVING IN INFORMATION TECHNOLOGY	3(2-2-5)
06036027	COMPUTER SYSTEMS ORGANIZATION AND OPERATING SYSTEM	3(3-0-6)
06036081	FOUNDATION ENGLISH 1	3(3-0-6)
06036083	DEVELOPMENT OF READING AND WRITING SKILL IN ENGLISH	3(3-0-6)
06036085	INTRODUCTION TO MATHEMATICAL ECONOMICS	3(3-0-6)
Total of credits		18

1st Year, semester 2

Code	Subject	Amount of credits
06036002	MATHEMATICS FOR INFORMATION TECHNOLOGY	3(3-0-6)
06036004	MANAGEMENT AND ORGANIZATIONS	3(3-0-6)
06036022	COMPUTER PROGRAMMING	3(2-2-5)
06036082	FOUNDATION ENGLISH 2	3(3-0-6)
06036084	ENGLISH FOR PROFESSIONAL PRESENTATION	3(3-0-6)
06036090	GENERAL BUSINESS	3(3-0-6)
Total of credits		18

2nd Year, semester 1

Code	Subject	Amount of credits
06036003	PROBABILITY AND STATISTICS	3(3-0-6)
06036005	FINANCIAL ACCOUNTING	3(3-0-6)
06036023	BASIC DATA STRUCTURES AND ALGORITHMS	3(3-0-6)
06036028	INTRODUCTION TO COMPUTER NETWORKS	3(3-0-6)
06036087	REPORT WRITING	3(3-0-6)
06036089	ENTREPRENEURSHIP	3(3-0-6)
Total of credits		18

2nd Year, semester 2

Code	Subject	Amount of credits
06036006	MANAGEMENT INFORMATION SYSTEMS	3(3-0-6)
06036008	DIGITAL BUSINESS TECHNOLOGY	3(3-0-6)
06036011	DATABASE SYSTEM CONCEPTS	3(2-2-5)
06036012	HUMAN INTERFACE DESIGN	3(3-0-6)
06036013	WEB AND MULTIMEDIA TECHNOLOGY	3(2-2-5)
06036024	BUSINESS INFORMATION SYSTEM ANALYSIS AND DESIGN	3(3-0-6)
Total of credits		18

3rd Year, semester 1

Code	Subject	Amount of credits
06036007	INFORMATION TECHNOLOGY PROJECT MANAGEMENT	3(3-0-6)
06036009	ECONOMICS OF INFORMATION TECHNOLOGY	3(3-0-6)
06036010	BUSINESS PROCESSES AND ENTERPRISE RESOURCE PLANNING	3(2-2-5)
06036014	INFORMATION SYSTEM SECURITY AND IT LAWS	3(3-0-6)
06036025	OBJECT ORIENTED TECHNOLOGY	3(3-0-6)
060360xx	ELECTIVE COURSE IN INFORMATION TECHNOLOGY 1	3(3-0-6) or 3(2-2-5)
Total of credits		18

3rd Year, semester 2

Code	Subject	Amount of credits
06036015	DIGITAL MARKETING	3(2-2-5)
06036016	BUSINESS INTELLIGENCE AND BIG DATA	3(3-0-6)
06036017	ENTERPRISE SYSTEMS	3(3-0-6)
06036018	SOCIAL MEDIA AND SOCIAL NETWORK	3(3-0-6)
06036026	MOBILE APPLICATION DEVELOPMENT	3(2-2-5)
060360xx	ELECTIVE COURSE IN INFORMATION TECHNOLOGY 2	3(3-0-6) or 3(2-2-5)
Total of credits		18

4th Year, semester 1

Code	Subject	Amount of credits
06036046	COOPERATIVE EDUCATION	6(0-35-0)
or	or	
06036047	OVERSEA COOPERATIVE EDUCATION	6(0-35-0)
Total of credits		6

4th Year, semester 2

Code	Subject	Amount of credits
06036086	PHILOSOPHY OF SCIENCE	3(3-0-6)
06036088	CREATIVE THINKING	3(3-0-6)
xxxxxxxx	FREE ELECTIVE COURSE 1	3(3-0-6)
xxxxxxxx	FREE ELECTIVE COURSE 2	3(3-0-6)
Total of credits		12

Total credits of the program 126 credits

Course Description

06036001 INFORMATION TECHNOLOGY FUNDAMENTALS 3(2-2-5)

PREREQUISITE: NONE

Evolution of information technology; components of computer systems; data processing systems; hardware and software; overview of operating system; data and data representation; data management; basic concepts for programming; database technology; data communication; computer network systems and the Internet; ethical and social issues in information technology.

06036002 MATHEMATICS FOR INFORMATION TECHNOLOGY 3(3-0-6)

PREREQUISITE: NONE

Limit and continuity; derivative of functions; higher derivatives; applications of derivative; maxima and minima of functions; integration and techniques of integration; applications of integration; functions of two variables; partial derivatives; linear algebra; matrices and determinants; system of linear equations and its solutions; vector spaces; linear transformations; matrix transformation; orthogonal matrix.

06036003 PROBABILITY AND STATISTICS 3(3-0-6)

PREREQUISITE: NONE

Probability and random variables; some discrete and continuous probability distributions; functions of random variables; sampling distribution; estimation and test of hypotheses; simple and multiple linear regression and correlation analyses.

06036004 MANAGEMENT AND ORGANIZATIONS 3(3-0-6)

PREREQUISITE: NONE

Theory and practice of organizational management; Leadership; business strategy development; organizational behavior; organizational structure; human resource management; organizational change; organization in digital age.

06036005 FINANCIAL ACCOUNTING 3(3-0-6)

PREREQUISITE: NONE

Theory and practice of accounting; procedures in the accounting cycle; use of journals and ledgers; adjusting and closing entries; creating financial statements.

06036006 MANAGEMENT INFORMATION SYSTEMS 3(3-0-6)

PREREQUISITE: 90401013 GENERAL BUSINESS

Roles of information technology in business; information system concepts and management; IT strategy; strategic information technology planning; aligning IT with business strategy; information system acquisition; functional information systems; enterprise systems; trends in applications of information technology; ethical and social issues.

06036007 INFORMATION TECHNOLOGY PROJECT MANAGEMENT 3(3-0-6)

PREREQUISITE: NONE

Nature and life cycle of information technology (IT) projects; project feasibility; project selection techniques; project management body of knowledge; team management; project scope management; project estimation; project scheduling; quality management; change management; project controlling; project evaluation.

060360083 DIGITAL BUSINESS TECHNOLOGY 3(3-0-6)

PREREQUISITE: NONE

Cloud computing; mobile; big data; web services and social network; underlying technology and approaches; current practices and future trends; business impact.

06036009 ECONOMICS OF INFORMATION TECHNOLOGY 3(3-0-6)

PREREQUISITE: NONE

Fundamental economic principles; economic theories and concepts relating to innovation process and technical change; information technology market; evaluation of information technology investment; implications of information technology on economic and industrial development; employment; business growth; productivity; technology transfer; research and development; social transformation of information age.

06036010 BUSINESS PROCESSES AND ENTERPRISE RESOURCE PLANNING 3(2-2-5)

PREREQUISITE: 06036006 MANAGEMENT INFORMATION SYSTEMS

Key business processes in organization; accounting process, procurement process, inventory and warehouse management process, production process, and order fulfilment process; Integrate business processes with enterprise resource planning (ERP); concepts of ERP; learning practical skills on how to make business processes run on standard application of ERP.

06036011 DATABASE SYSTEM CONCEPTS 3(2-2-5)

PREREQUISITE: NONE

Introduction to the database and DBMS; file systems; database systems and environment; types of databases; data models; relational database model; tables; keys; integrity rules; relational algebra; data dictionary; entity relationship model; normalization; SQL; Introduction to transaction management and database administration; data modeling and database language laboratory.

06036012 HUMAN INTERFACE DESIGN 3(3-0-6)

PREREQUISITE: NONE

Human factors and roles in user interface design; human-machine interface technology (e.g. text entry devices; positioning and pointing devices; speech technology and VR devices); interaction models; interaction styles (e.g. command line-driven interface, menu-driven interface, natural language interface); hypertext and hypermedia; design process and tools; design principles and guidelines; design evaluation techniques; design issues for modern operating systems and mobile computing devices.

06036013 WEB AND MULTIMEDIA TECHNOLOGY 3(2-2-5)

PREREQUISITE: NONE

Multimedia systems; types for multimedia data; creation of multimedia; multimedia data processing; multimedia data transmission; multimedia file format; multimedia data storage devices; multimedia data presentation; web-based multimedia technology; applications of multimedia; multimedia and web authoring tools.

**06036014 INFORMATION SYSTEM SECURITY AND INFORMATION
TECHNOLOGY LAWS 3(3-0-6)**

PREREQUISITE: NONE

Information system security; threats; vulnerabilities; risk assessment and analysis; information system security policies; information system security management; cryptography; authentication; access control; computer crime; computer forensic and defense; network security; Intellectual properties; ownership of information; copyright; patent; and trademark laws; trade secret; organizational culture; professionalism; codes of professional conduct; ethical problems associated with Information Technology; privacy and confidentiality; software piracy.

06036015

DIGITAL MARKETING

3(2-2-5)

PREREQUISITE: NONE

Contemporary business and marketing; online and offline advertising in digital world, e.g., television, display, search, video, and mobile advertising, etc.; digital advertising and media management; marketing communications campaign and evaluation planning; ethical marketing practice; concepts of social responsibility and sustainability; brand strategy; design principles of web and mobile application for digital marketing; design thinking in marketing; social media for brand management and advertising.

06036016

BUSINESS INTELLIGENCE AND BIG DATA

3(3-0-6)

PREREQUISITE: NONE

Business intelligence (BI) and its components; Big data and big data Analytics, focusing on technologies, which allow business users to gather, store, access and analyze big data to improve the business decision making capabilities; characteristics of big data: volume, variety, velocity, veracity and value; Data Warehousing; data mining (big data analytics); analytical reporting; data visualization.

06036017

ENTERPRISE SYSTEMS

3(3-0-6)

PREREQUISITE: NONE

A foundation understanding of enterprise systems and how these systems fit into today's business operations; Enterprise Resource Planning (ERP) systems; Supply Chain Management (SCM) systems; Customer Relationship Management (CRM) systems; Business Analytics; Focus on both business management practice and technology.

06036018

SOCIAL MEDIA AND SOCIAL NETWORK

3(3-0-6)

PREREQUISITE: NONE

Theoretical and applied approaches of social media in organizations; Understand how people and organizations adapt social interaction to the capabilities provided by social media; the advantages and disadvantages associated with social media; social media and business; introduction to main social media networks; basic network concepts; psychological foundations of social networks; social network analysis.

06036019 PROJECT 1 3(0-9-0)

PREREQUISITE: NONE

Study or research of interesting current topics in information technology undertaking a work project based by applying the theoretical aspects of the information technology studies under the supervision of a faculty member to be able to present a project proposal and elementary result from practical solving or academic analysis

06036020 PROJECT 2 3(0-9-0)

PREREQUISITE: 06036019 PROJECT 1

Study or research of interesting current topics in information technology undertaking a work project based by applying the theoretical aspects of the information technology studies under the supervision of a faculty member to be able to present a complete result of the proposed topic and study as continued from project 1

06036021 PROBLEM SOLVING IN INFORMATION TECHNOLOGY 3(2-2-5)

PREREQUISITE: NONE

Problem solving strategies and concepts; algorithmic thinking; flowchart; concepts and introduction to computer programming.

06036022 COMPUTER PROGRAMMING 3(2-2-5)

PREREQUISITE: NONE

Problem analysis and solving process; flowchart; introduction to programming languages; concepts of C programming language; problem solving using C; data and data types in C; assignment statement and basic functions; conditional and loop structures; modular programming; general structure of a C function; working with functions; arrays and pointers; user-defined types; file I/O.

06036023 BASIC DATA STRUCTURES AND ALGORITHMS 3(3-0-6)

PREREQUISITE: NONE

Data types; data structures and abstract data types; basic data structures; (e.g. list, stack and queue) dynamic data structures; terminology of trees; binary trees; binary search trees; AVL trees; graph; time and space analysis of programs; sorting and searching algorithms; greedy algorithm; divide-and-conquer algorithms; graph algorithms; and dynamic programming.

06036024 BUSINESS INFORMATION SYSTEM ANALYSIS AND DESIGN 3(3-0-6)

PREREQUISITE: NONE

Tools and methodologies for business information systems development; current concepts of business information system analysis and design; system analysis model; system design models; the importance of control process during the planning, analysis, design, implementation, and testing phases of business information systems to solve business management problems; case studies.

06036025 OBJECT-ORIENTED TECHNOLOGY 3(3-0-6)

PREREQUISITE: NONE

Object-oriented program design and development; encapsulation; classes and objects; methods and message passing; inheritance and polymorphism; graphical user interface development and event handling; data structures: arrays and collections; exception handling; input/output classes; threads.

06036026 MOBILE APPLICATION DEVELOPMENT 3(2-2-5)

PREREQUISITE: NONE

Introduction to technology and the programming of applications for mobile computing including devices such as smart phones; pads and tablets; developing mobile applications and using device emulators for coding and testing.

06036027 COMPUTER SYSTEMS ORGANIZATION AND OPERATING SYSTEM 3(3-0-6)

PREREQUISITE: NONE

Computer evolution; computer components, CPU, memory, I/O; operating system; process; process synchronization; process scheduling; memory management; virtual memory; file and input/output management.

06036028 INTRODUCTION COMPUTER NETWORKS 3(3-0-6)

PREREQUISITE: NONE

Basic concepts of computer network; fundamentals of data communications, such as transmission media, encoding, modulation, and multiplexing; circuit and packet switching; computer networking devices; OSI reference model and TCP/IP protocol stack; application layer protocols such as HTTP, FTP, SMTP, POP3, and DNS; Transmission layer protocols such as TCP and UDP; IPv4 addressing; VLSM; CIDR; ICMP; DHCP and static routing; Local Area Network (LAN); Ethernet; ARP; Spanning Tree protocol; medium access control; and introduction to Wide Area Network (WAN).

06036029

REQUIREMENT ENGINEERING

3(3-0-6)

PREREQUISITE: NONE

Apply requirements management techniques; analyze the problem; understand stakeholder needs; capture and document requirements with use-case modeling; describe a documentation hierarchy and standards for defining levels of requirements; define the system; manage scope; Refine the system definition; use requirement attributes and traceability; manage changing requirements; use requirements to drive ongoing design; test; and user documentation activities.

06036030

ADVANCED DATABASE SYSTEMS

3(3-0-6)

PREREQUISITE: 06036011 DATABASE SYSTEM CONCEPTS

Advanced database design and data protection; conceptual schema models; conceptual schemas/logical data structures mapping; crash recovery using various log-based techniques and shadow paging; buffer management; various concurrency control techniques; transaction failure recovery; deadlock handling; semi-structured data and XML; query processing; query optimization; distributed database; object-oriented databases.

06036031

DATABASE SYSTEM MAINTENANCE AND ADMINISTRATION

3(2-2-5)

PREREQUISITE: 06036011 DATABASE SYSTEM CONCEPTS

Creating views and sequence; set operators; creating PL/SQL; declaring variables; executable statements; control structures; composite data types; explicit cursors; handling exceptions; procedures and functions; managing subprograms; packages; manipulating large objects; triggers; Database server architecture; client database management; creating databases; data dictionary and dynamic performance views; control files; redo log files; maintaining tablespaces and data files; storage structures; undo data; maintaining tables; maintaining indexes; data integrity; managing users; privileges and roles; loading data into a database; database backup and recovery; import and export utility.

06036032

COMPUTER GRAPHICS AND ANIMATION

3(2-2-5)

PREREQUISITE: NONE

Raster and vector graphics; 2D and 3D object representations; 3D rendering pipeline; 3D projection and transformation techniques; 3D lighting and shading techniques; 3D texture mapping techniques; 3D rendering techniques; basic 2D and 3D computer animation concepts; post production techniques; graphic processor units; standard computer graphic application programming interfaces; programming and scripting languages for interactive 3D computer graphics; 3D computer graphic modeling and rendering software; creating basic interactive 3D computer graphic applications; using 3D computer graphics software.

06036033 SUPPLY CHAIN MANAGEMENT AND LOGISTICS 3(3-0-6)

PREREQUISITE: NONE

The need for supply chain integration and the challenges of managing complex interfaces; the systems approach to the planning, analysis, design, development, and evaluation of SCM; activities that lead to integration of information and material flows across multiple organizations in the supply chain including global supply chains, roles of suppliers, internal process, and distribution channels.

06036034 KNOWLEDGE MANAGEMENT 3(3-0-6)

PREREQUISITE: NONE

Hierarchy of data, information, and knowledge; knowledge representation, e.g., predicate logic, fuzzy logic, semantic network, frames and objects, ontologies and semantic web; expert systems; forward and backward chaining rules; unification and conflict resolution; case-based reasoning; constraint-based reasoning; artificial neural network; machine learning; statistical learning techniques; research topics in data and knowledge engineering.

06036035 INTRODUCTION TO CLOUD TECHNOLOGY 3(3-0-6)

PREREQUISITE: NONE

Introduction to cloud architecture; cloud delivery models; cloud deployment models; Cloud-Enabling technology; cloud management; cloud security; and business cost metrics and pricing models for cloud services

06036036 OPERATIONS MANAGEMENT 3(3-0-6)

PREREQUISITE: 90401013 GENERAL BUSINESS

Overview of operations management; linear programming; integer programming; location planning; facility layout; inventory management; quality management; project management; forecasting.

06036037 DECISION SUPPORT SYSTEMS 3(3-0-6)

PREREQUISITE: 06036006 MANAGEMENT INFORMATION SYSTEMS

Introduction to decision support systems; decision making process; characteristics and components of decision support systems; modeling and analysis; business intelligence; business analytics; group decision support systems; artificial intelligence and expert systems; intelligent systems; decision support system development; integration and trend of decision support systems.

06036038 BUSINESS PERFORMANCE MANAGEMENT 3(3-0-6)

PREREQUISITE: NONE

Strategic Planning; defining business performance and choosing a measurement approach; performance management process; performance planning, performance execution, performance assessment, performance review; introduction of performance management system; performance management best practices.

06036039 MACHINE LEARNING 3(3-0-6)

PREREQUISITE: NONE

Basic of machine learning; supervised learning; linear regression; least squares; logistic regression; neural network; k-nearest neighbor; support vector machine; unsupervised learning; k-mean clustering; expectation-maximization algorithm; dimensionality reduction; principal component analysis; cross-validation; evaluating estimator performance; machine learning applications.

06036040 INFORMATION TECHNOLOGY GOVERNANCE 3(3-0-6)

PREREQUISITE: NONE

The importance of effective IT organization management; IT organization and chief information officer (CIO); frameworks to support effective IT governance; IT governance standards; IT/business alignment; IT governance measurement and evaluation; IT operations and infrastructure management; IT problem management; application management; IT human resources; vendor selection and management; IT budgeting and cost management; effective decision making and risk management; demand management and project prioritization.

06036041 INNOVATION AND CHANGE MANAGEMENT 3(3-0-6)

PREREQUISITE: NONE

Organization environment; responding to change; creativity and opportunity; organizational change; process innovation; product innovation; quality and performance excellence; change management process; development for change in organizational level and individual.

06036042 SPECIAL TOPICS IN INFORMATION TECHNOLOGY 1 3(3-0-6)

PREREQUISITE: NONE

This course will cover recent advances and other topics of interest selected by the instructors in the field of Information Technology.

06036043	SPECIAL TOPICS IN INFORMATION TECHNOLOGY 2	3(3-0-6)
	PREREQUISITE: NONE	
	This course will cover recent advances and other topics of interest selected by the instructors in the field of Information Technology.	
06036044	SPECIAL WORKSHOP IN INFORMATION TECHNOLOGY 1	3(2-2-5)
	PREREQUISITE: NONE	
	This course focuses on selected topics and practical workshop in Information Technology, which selected by a lecturer	
06036045	SPECIAL WORKSHOP IN INFORMATION TECHNOLOGY 2	3(2-2-5)
	PREREQUISITE: NONE	
	This course focuses on selected topics and practical workshop in Information Technology, which selected by a lecturer	
06036046	COOPERATIVE EDUCATION	6(0-35-0)
	PREREQUISITE: NONE	
	Cooperative Education is a collaborated education program between educational institutes and enterprises that allows students to apply their knowledge in the classroom with practical work experience. The student's project work must be approved by the faculty and the enterprises. After completion, students need to present their works to the examination committee.	
06036047	OVERSEA COOPERATIVE EDUCATION	6(0-35-0)
	PREREQUISITE: NONE	
	Cooperative education is a collaborated education program between educational institute enterprises that allows students to apply their knowledge in the classroom with practical work experience. The student's project work must be approved by the faculty and the enterprises. A completion, students need to present their works to the examination committee.	
06036081	FOUNDATION ENGLISH 1	3(3-0-6)
	PREREQUISITE: NONE	
	A practice in four language skills related to daily life activities, including the use of dictionary as well as the study of vocabulary, language and expressions in reading passages selected from printed materials such as journals, newspapers, etc as well as a revision of grammatical structures and social functions of language in various situations.	

06036082 **FOUNDATION ENGLISH 2** **3(3-0-6)**

PREREQUISITE: NONE

A practice in four language skills for academic purposes, for example, using references, reading non-verbal texts, including summary writing, listening and discussion, grammar revision and further practice in social language.

06036083 **DEVELOPMENT OF READING AND WRITING SKILLS IN ENGLISH** **3(3-0-6)**

PREREQUISITE: NONE

A study of effective reading techniques in English relevant to reading for the main idea, newspaper reading, reading for translation, writing skills development in English focusing on accuracy in both language forms and grammar beneficial to careers and academic purposes such as writing application letters, filling application forms, writing reports, etc.

06036084 **ENGLISH FOR PROFESSIONAL PRESENTATION** **3(3-0-6)**

PREREQUISITE: NONE

A study and practice of communication and presentation skills with an emphasis on practical preparation and training of all theoretically gained knowledge such as the ability to present self-confidently and professionally, the ability to manage verbal and nonverbal parts of the speech, including the ability to deal with stage-fright and work with the audience.

06036085 **INTRODUCTION TO MATHEMATICAL ECONOMICS** **3(3-0-6)**

PREREQUISITE: NONE

A Study of Mathematics tools; Matrix, Solution of system of equations, Cramer's rule, Derivative of function, Quadratics functions, Maximum and Minimum value, Partial derivative, and integration. Application of Mathematics to solve basic Economics and Commerce problems in daily life such as, finding equilibrium point of price and quantity of product on the markets, Input Output Analysis, Transition matrix, Demand and Supply function, Cost and Revenue function, Elasticity function.

06036086 **PHILOSOPHY OF SCIENCE** **3(3-0-6)**

PREREQUISITE: NONE

The course provides a study of the thing we call "science", together with its nature and methodology. The topics cover the meaning of science, reality, the nature of scientific observations, scientific theories and their discovery and formation, scientific explanations and predictions, the problem of induction, scientific rationality, the nature of scientific knowledge,

concepts of truth, hypothesis testing, hypothesis confirmation, hypothesis falsification, logic of scientific method, and scientific progress.

06036087 REPORT WRITING 3(3-0-6)

PREREQUISITE: NONE

A study of formats and procedures of report writing as well as a practice of various report writing such as news reports, minutes, academic papers etc.

06036088 CREATIVE THINKING 3(3-0-6)

PREREQUISITE: NONE

This course explores approaches to “How might we proceed when confronted by problems, situations too ambiguous, complex, or messy or impossible to be addressed directly through logical strategies?” It seeks to increase the participants’ understanding of creativity, to improve their creative problem-solving skills and to enhance their ability to promote these skills in others, in a variety of educational settings. Students participate in activities designed to help develop their own creativity and discuss the creative process from various theoretical perspectives. Readings are on such topics as creative individuals, environments that tend to enhance creative functioning, and related educational issues. Discussions with artists, scientists and others particularly involved in the creative process focus on their techniques, and on ways in which creativity can be nurtured.

06036089 ENTREPRENEURSHIP 3(3-0-6)

PREREQUISITE: NONE

A study of successful business entrepreneurs, characters of successful entrepreneur, categories of entrepreneurs, business set-up, business plan writing, operating strategies, modern techniques in business management and case studies of successful entrepreneurship.

06036090 GENERAL BUSINESS 3(3-0-6)

PREREQUISITE: NONE

A study of the meaning of administration processes focusing on business, business resources and allocation, types of business organization, organizing, human relations, leadership, motivation and the implementation of basic principles and general knowledge of marketing, personnel management, finance and accounting in the business.