Information Technology

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CURRICULUM STRUCTURE

**Total number of credits: 132 Credits**

1. **General Education Courses (30  Credits)**
   1. **Language Courses (14 Credits)**
   2. **Humanities Course (2 Credits)**
   3. **Social Science Courses (9 Credits)**
   4. **Science and Mathematics Courses (5 Credits)**
2. **Specialized Courses (90 Credits)**
   1. **Core Courses (12 Credits)**
   2. **Major Courses (45 Credits)**
   3. **Major Elective Courses (33 Credits)**
3. **Free Elective Courses (12 Credits)**

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GENERAL EDUCATION COURSE

***Language Courses*  
ELE 1001 Communicative English I  
ELE 1002 Communicative English II  
ELE 2000 Academic English  
ELE 2001 Advanced Academic English  
GE 1410 Thai for Professional Communication (for Thai students)  
or GE 1411 Thai Language for Multicultural Communication (for non-Thai students)  
or GE 1412 Introductory Thai  Usage  (for Thai students from International Program)**

***Humanities Course*  
GE 2110 Human Civilizations and Global Citizens**

***Social Science Courses*  
BBA 1004 Essential Marketing for Entrepreneurs  
BBA 1005 Essential Finance for Entrepreneurs  
BBA 1006 Essential Economics for Entrepreneurs  
GE 2202 Ethics**

***Science and Mathematics Courses*  
BBA 1007 Data Analytics for Entrepreneurs  
GE 1303 Science for Sustainable Future**

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SPECIALIZED COURSES

***Core Courses*  
CSX 2006 Mathematics and Statistics for Data Science**

**ITX 2005 Design Thinking  
ITX 3002 Introduction to Information Technology (\*)  
ITX 3004 Information System Analysis and Design (\*)**

***Major Courses*Organization Issues and Information Systems Group  
ITX 3003 Business Systems (\*)  
ITX 3008 IT Project Management (\*)  
ITX 4503 Information System Security  
  
Applications Technology Group  
ITX 2004 UI/UX Design and Prototyping  
ITX 2007 Data Science  
ITX 2009 Presentation and Data Visualization Techniques  
ITX 3006 Database Management Systems (\*)  
ITX 3009 Senior Project I (\*)  
ITX3010 Senior Project II (\*)  
  
Technology and Software Methods Group  
CSX 3001 Fundamentals of Computer Programming (\*)  
CSX 3002 Object-Oriented Concepts and Programming  
CSX 3003 Data Structures and Algorithms  
ITX 3007 Software Engineering (\*)  
  
Systems Infrastructure Group  
CSX 2009 Cloud Computing**

**CSX 3005 Computer Networks (\*)**

***(Remark: \* These are major required courses. At least C grades are required to pass the courses.)***

MAJOR ELECTIVE COURSES

**Major Elective Courses are divided into two groups:**

**Major Elective Courses Group 1  
     1(A): Software Engineering and Development  
     1(B): Informatics and Data Science  
     1(C): Innovative Marketing Technology  
     1(D): Innovative Food Technology  
     1(E): Innovative Music Technology  
     1(F): Innovative Financial Technology  
   Major Elective Courses Group 2  
\* Students are required to choose one concentration out of 6 concentrations and study 5 subjects (15 credits) from the chosen concentration and study 6 subjects (18 credits) from all major elective courses.  
\*\* Students are also required to study at least 5 CSX and/or ITX subjects (15 credits) out of 11 major elective courses (33 credits).**

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MAJOR ELECTIVE COURSES GROUP 1

**Group 1(A): Software Engineering and DevelopmentCSX 4107 Web Application Development  
CSX 4109 Android Application Development  
ITX 4103 Requirement Engineering  
ITX 4104 Software Testing  
ITX 4110 Enterprise System Integration  
ITX 4111 Software Architectures  
ITX 4518 Blockchain and Digital Currencies  
ITX 4180-4199 Selected Topic [in Software Engineering]**

***Group 1(B): Informatics and Data Science***

**CSX 4201 Artificial Intelligence Concepts  
CSX 4202 Data Mining  
CSX 4211 Data Engineering  
ITX 4212 Predictive Analytics  
ITX 4213 Artificial Intelligence for Business  
ITX 4214 Data Science Project Management  
ITX 4215 Business Insights and Visualization  
ITX 4280-4299 Selected Topic [in Data Science]**

***Group 1(C): Innovative Marketing Technology*  
CA 1103 Computer Graphic Design  
CA 2110 Media Literacy and Ethical Concerns  
CA 3100 Consumer Insight and Tools  
CA 3111 Creative Entrepreneurial Project Management  
ITX 4213 Artificial Intelligence for Business  
ITX 4215 Business Insights and Visualization  
ITX 4518 Blockchain and Digital Currencies  
ITX 4900-4909 Selected Topic [in Marketing Technology]**

***Group 1(D): Innovative Food Technology*FT 4144 Food Ingredients Functionality  
FT 4152 Bioinformatics for Food Technology  
FT 4153 Integrated IOT to Smart and Green Food Industry  
FT 4154 Intelligent Packaging Technology  
ITX 4213 Artificial Intelligence for Business  
ITX 4215 Business Insights and Visualization  
ITX 4518 Blockchain and Digital Currencies  
ITX 4910-4919 Selected Topic [in Food and Agriculture Technology]**

***Group 1(E): Innovative Music Technology*MB 3541 Online Social Media for Music Business  
MB 3550 Feasibility Study for Music Entrepreneur  
MB 3551 Creative Music Entrepreneurship  
ITX 4213 Artificial Intelligence for Business  
ITX 4215 Business Insights and Visualization  
ITX 4518 Blockchain and Digital Currencies  
ITX 4920-4929 Selected Topic [in Music Innovation]**

***Group 1(F): Innovative Financial Technology*IBE 2103 Business Finance  
IBE 3101 Business Analysis  
BFN 3211 Investment Strategy and Applied Valuation  
BFN 4314 Personal Wealth Management and Financial Planning  
BFN 4421 Portfolio Management and Analysis 3  
BFN 4431 Startup Finance and FinTech  
ITX 4213 Artificial Intelligence for Business  
ITX 4215 Business Insights and Visualization  
ITX 4518 Blockchain and Digital Currencies  
ITX 4930-4939 Selected Topic [in Finance and Insurance Technologies]**

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MAJOR ELECTIVE COURSES GROUP 2

**CSX 4108 iOS Application Development  
CSX 4205 Big Data Analytics  
CSX 4306 Internet of Things  
CSX 4407 Enterprise Application Development  
CSX 4514 Cross-platform Application Development  
ITX 4106 Enterprise Architectures  
ITX 4307 Business Continuity Planning and Management  
ITX 4403 Manufacturing Management System  
ITX 4404 Supply Chain Management System  
ITX 4502 Tech Startup  
ITX 4504 Digital Marketing  
ITX 4505 Digital Transformation  
ITX 4507 Information Retrieval and Search Engines  
ITX 4508 Quantitative Research for Digital Business  
ITX 4509 Cybersecurity  
ITX 4510 Data Policies and Governance  
ITX 4511 Internet of Behaviors  
ITX 4512 Marketing Automation Systems  
ITX 4513 Social Media Analytics  
ITX 4517 Software Configuration Management  
ITX 4519 Internetworking Workshop  
ITX 4600-4699 Selected Topics**