

International Undergraduate Program
Faculty of Engineering, Kasetsart University

| Course ID | Course Name | Credit | Date / Time |
|------------------|--------------------------|---------------|--------------------|
| 01204111 | Computer and Programming | 3 | Tue 13-15 |

Course Description

Basic structure of modern computer systems; data representation in computers; algorithmic problem solving; program design and development methodology; introductory programming using a high-level programming language; programming practice in computer laboratory.

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| Course ID | Course Name | Credit | Date / Time |
|------------------|---|---------------|--------------------|
| 01219214 | Probability and Statistics for Software and Knowledge Engineers | 3 | Thu 9-12 |

Course Description

Probability; discrete and continuous random variable; function of random variable; multiple random variables; sampling; sampling distribution; descriptive statistics; distribution visualization; parameter estimation; confidence intervals; hypothesis testing; Chi square test; regression analysis; application to software and knowledge engineering problems.

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| Course ID | Course Name | Credit | Date / Time |
|------------------|--------------------------------|---------------|--------------------|
| 01219217 | Data Structure and Algorithm I | 3 | Tue 13-16 |

Course Description

Abstract data types: stack, queues, lists, trees, and graphs; data abstraction; basic algorithms for problem solving: analysis of algorithms, correctness of algorithms, complexity analysis, greedy algorithms, divide-and-conquer techniques.

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| Course ID | Course Name | Credit | Date / Time |
|------------------|---|---------------|--------------------|
| 01219224 | Computer Network Architecture and Programming | 3 | Fri 9-12 |

Course Description

Principle of data communication; communication architecture and protocols; local and wide area networks; internetworking with TCP/IP and the internet; network programming; web application programming interface; related and emerging network technologies.

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| Course ID | Course Name | Credit | Date / Time |
|------------------|---|---------------|--------------------|
| 01219245 | Individual Software Development Process | 3 | Wed 9–11 |

Course Description

Modern software development process; iterative and incremental development; individual project planning and estimation; time management; tracking time, code quality; code refactoring; code review, source code version control; introduction to software testing; software development under a modern framework.

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| Course ID | Course Name | Credit | Date / Time |
|------------------|---|---------------|--------------------|
| 01219345 | Software Verification and Validation Laboratory | 1 | (Lab) Fri 9-12 |

Course Description

Basic concepts of software verification and validation; component testing; integration testing; system testing and user acceptance testing; coverage analysis; non functional testing; review techniques; static analysis of software; defect reporting.

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| Course ID | Course Name | Credit | Date / Time |
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| 11219346 | Software Process and Project Management | 3 | Sat 10–12 |

Course Description

Standard processes to manage software project; timeline, budget and resource planning; work breakdown structure; project monitoring and control; measurement and analysis; configuration management; test and deployment steps.