

# Exercise for Information Technology Engineers

Syllabus Number

4E301

Special Subjects  
Elective 2 credit

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## 1. Course Description

Japan's Fundamental Information Technology Engineer Examination (FE exam) is a category of exams included in Information Technology Engineers Examinations in Japan. The purpose of this course is to learn the basis of information technologies through the explanation of past issues of FE exam and the practice for FE exam.

This course is related to DP2 and DP3.

## 2. Course Objectives

About below mentioned knowledge of information technologies, the learners of this course are able to solve practical problems that are included in the afternoon examinations of Fundamental Information Technology Engineer Examination.

- Information Security
- Computer Systems (Hardware, Software, Database, Network)
- Data Structures and Algorithms
- Software Design
- Software Development
- Management (Project Management, Service Management)
- Strategies (System Strategies, Business Strategies, Corporate and Legal Affairs)

## 3. Grading Policy

Learners have to get the acceptances of all essential assignments of this course. This course evaluates at the following rate: the states of self check tests are 20%, assignments are 30%, and a term-end examination is 50%. Learners who received evaluation over the total 60% will be passed this course.

## 4. Textbook and Reference

Textbook

アイテックIT人材教育研究部 2021 基本情報技術者 午後試験対策書 アイテック, 2020, ISBN-13:978-4865752113

## 5. Requirements(Assignments)

Learners have to understand knowledge of morning time exam level questions of FE Exam. Learners should acquire the courses of each area (which are shown on curriculum guide book): information science, fundamental of informatics, computer systems and web/networking. However, because FE Exam treats fundamental knowledge, it is not needed to understand those deeply. For effective learning, learners should practice past exam questions of FE Exam as the review of these courses. After a class, learners have to practice issues of same areas to understand deeply and acquire skills of problem solving. Learners must use 3 hours for these activities.

## 6. Note

## 7. Schedule

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| [1]  | Explanation of Fundamental Information Technology Engineer Examination         |
| [2]  | Questions of Security  |
| [3]  | Multiple-Choice Questions on Technology Fields (Hardware, Software)            |
| [4]  | Multiple-Choice Questions on Technology Fields (Database)                      |
| [5]  | Multiple-Choice Questions on Technology Fields (Network)                       |
| [6]  | Multiple-Choice Questions on Technology Fields (Software Design)               |
| [7]  | Practice for Multiple-Choice Questions on Technology Fields                    |
| [8]  | Multiple-Choice Questions on Management Fields                                 |
| [9]  | Multiple-Choice Questions on Strategy Fields                                   |
| [10] | Questions of Data Structure and Algorithms (Pseudo-Languages)                  |
| [11] | Questions of Data Structure and Algorithms (Fundamental Algorithms)            |
| [12] | Questions of Data Structure and Algorithms (Processing for Arrays and Strings) |
| [13] | Practice for Questions of Data Structure and Algorithms                        |
| [14] | Multiple-Choice Questions on Software Development (Java)                       |
| [15] | Multiple-Choice Questions on Software Development (Assembly Language)          |