

# Course Syllabus

**01076013 / 01076121 Theory of Computation**

**Computer Engineering, KMITL**

**Instructor:** Assoc. Prof. Dr. Kietikul Jearanaitanakij

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**Course Line group** : <https://line.me/R/ti/g/Tyf7O1iQk3>

**Lecture playlist on YouTube** : Study clip(s) before attend each class.

<https://youtube.com/playlist?list=PLDDdXBbnvycQI9ENIW-uQrLZi7VSi6lF->

**Text book:** “[An Introduction to Formal Languages and Automata](#)”, by Peter Linz.

**Handout:**

[https://drive.google.com/file/d/1w5gOaLO6l6RHVW\\_fo4KPS7sZoRp6Mw9S/view?usp=sharing](https://drive.google.com/file/d/1w5gOaLO6l6RHVW_fo4KPS7sZoRp6Mw9S/view?usp=sharing)

**Exercise and homework:**

[https://drive.google.com/file/d/1KsjTg2FTLlutqwmQp6ktVW0ax\\_GqVYx/view?usp=sharing](https://drive.google.com/file/d/1KsjTg2FTLlutqwmQp6ktVW0ax_GqVYx/view?usp=sharing)

**Grading:**

- **Homework** (10 submissions) = 30%

**Link for homework submission:**

<https://forms.gle/EVem3RgQDtGo8HxX8>

- **Assignment:** Application of Regular Expression (10 students/group)  
= 20%

**Link for creating assignment group:**

<https://docs.google.com/spreadsheets/d/1RQH20YCWMi7UCK-LHIGfNHpfQjb-fxDNZl8dsvRNdMw/edit?usp=sharing>

**Link for assignment submission:**

<https://forms.gle/8g4cZ2DUm13TNbCh8>

- **Final exam** = 50% (Close book)

## Tentative Agenda

Week	Topics
1	Introduction
2	Mathematical Preliminaries
3	Deterministic Finite Automata
4	Nondeterministic Finite Automata
5	Regular Expression and Regular Grammar
6	Properties of Regular Language
7	Pumping Lemma
8	More Applications of Pumping Lemma
9	Context-free Languages
10	Context-free Grammars
11	Pushdown Automata
12	Properties of Context-free Languages
13	Pumping Lemma for Context-free Languages
14	More Applications of Pumping Lemma
15	Turing Machine