

## **2110572: Natural Language Processing Systems**

**Mondays 9:30-12:30 (ในเวลา)**

**Saturdays 9:00-12:00 (นอกเวลา)**

**ผู้สอน อ.เอกพล และ อ.พีรพล**



### **Course Outline**

The course will give an overview of the Natural Language Processing techniques in the transition period between traditional techniques and deep learning. The course will touch upon various standard NLP tasks, such as tokenization, language modeling, semantics, part-of-speech tagging, and parsing. Each topic will discuss both conventional and deep learning techniques. The second part of the course will go into application domains such as document classification, question answering, and chatbots. Many of the assignments will be in the context of Thai language. This course is not meant to be an entry-level machine learning course, and will not cover the basics of machine learning. This course is recommended for 4th year students who have already taken some machine learning course, and 3rd year students who are interested in doing senior projects that are related to NLP.

Tools: Python, keras, nltk, scikit-learn

**Prerequisites: some background in machine learning/data science**

Schedule (กำหนดการอาจมีการเปลี่ยนแปลง)

คาบเรียน		เนื้อหา	การบ้านและควิซ
18-Jan-20 21	23-Jan-20 21	Intro; Traditional Tokenization	HW1
25-Jan-20 21	30-Jan-20 21	Tokenization	HW2
1-Feb-20 21	6-Feb-20 21	PoS Tagging	HW3
8-Feb-20 21	13-Feb-2 021	Language Model	HW4
15-Feb-2 021	20-Feb-2 021	Word Representation	HW5
22-Feb-2 021	27-Feb-2 021	Text Categorization + ประกาศ midterm exam (take-home)	HW6
1-Mar-20 21	6-Mar-20 21	Parsing	HW7
8-Mar-20 21	13-Mar-2 021	Midterm Exam Week (8-12 Mar); No classes	
15-Mar-2 021	20-Mar-2 021	Midterm Exam Submission Attention mechanism & Machine Translation + QA	HW8
22-Mar-2 021	27-Mar-2 021	Transformer	HW9
29-Mar-2 021	3-Apr-202 1	Recent Research in NLP Project Announcement + Paper Announcement	HW10, Project + paper
5-Apr-202 1	10-Apr-20 21	NLP Application 1 (Guest); Tentative date: 10-Apr-2021	Guest speaker report
12-Apr-20 21	17-Apr-20 21	Songkran Holiday	
19-Apr-20 21	24-Apr-20 21	Paper Presentation & Progress Report due	
26-Apr-20 21	1-May-20 21	NLP Application 2 (Guest); Tentative date: 1-May-2021	Guest speaker report
3-May-20 21	8-May-20 21	Project Presentation due	
10-May-2 021	15-May-2 021	Final Exam Week (10-24 May); No Final Exam	

### การส่งงานสาย

การส่งงานสายเกิน 5 นาทีหลังจากหมดกำหนดส่งจะไม่ได้คะแนนในทุกกรณี

### เกณฑ์การวัดผล

Assignments 45% (4% each for HW, 2.5% each for guest report)

Midterm 25%

Project 30%

### การตัดเกรด

> 80% A

> 75% B+

> 70% B

> 65% C+

> 60% C

> 55% D+

> 50% D

< 50% F

### หนังสือเรียน

ไม่มีหนังสือเรียนบังคับ

หนังสือแนะนำ

Dan Jurafsky and James H. Martin, *Speech and Language Processing (3rd ed. draft)*,

<https://web.stanford.edu/~jurafsky/slp3/>

### Course Github

[https://github.com/ekapolc/NLP\\_2021](https://github.com/ekapolc/NLP_2021)

### Facebook Group

<https://web.facebook.com/groups/717005282521866>