

CHIANG MAI UNIVERSITY
Master of Science Program in Data Science
College of Arts, Media and Technology
1st Semester / Academic Year 2021

Course **CTDS 701 (961701) Everything Starts with Data**

3(3-0-6) credits

Sec 001: 2nd floor meeting room RTT building, Wednesdays 09:00 – 12:00

Sec 801: 2nd floor meeting room RTT building, Sundays 08:30 – 11:30

Class is held online via Zoom during Covid19 situation until 31 July

Course Description

Fundamental of data analytics, foundation of data scientists, data analytic process, data analytic tools, data set, data quality, data analytic project management, case study

Instructors

Lecturer Pruet Boonma, PhD.

Lecturer Pree Thiengburanathum, Ph.D. (pree.t@cmu.ac.th)

Course Materials

1. Cielen, D., Meysman, A., & Ali, M. (2016). *Introducing data science: big data, machine learning, and more, using Python tools*. Manning Publications Co.
2. EMC Education Services. (2015). *Data Science and Big Data Analytics: Discovering, Analyzing, Visualizing and Presenting Data*. Wiley.
3. Godsey, B. (2017). *Think like a data scientist*. Manning Publications Co.

Course Website

The course announcement and the instruction of all the assignments will be posted in the course's Google classrooms. The classroom id will be announced later in the classes.

Course Contents

ith week	Topics
1	Roles in the Data Science World
2	Basic data analytics – Knowledge Discovery and Data Mining (KDD)
3	Basic data analytics – From Data to Data Product
4	What is Data?
5	Dataset
6	Dataset and Data Quality
7	Data Science Process – The Historical view from KDD to Modern Processes
8	Data Science Process in Action
9	Midterm Examination
10	Introduction to Data Science Project Management
11	Introduction to Machine Learning – Part I
12	Introduction to Machine Learning – Part II
13	Basic Model Deployment
14	Case Study - I
15	Case Study - II
16	Closing
17	Final Examination

Note: Some topics of the aforementioned contents might be subject to change or add. The notice will be announced in the course website.

Course Work

- Lectures (3 hours per week)
- Term project
- Paper-based midterm and final examinations

Grading System

The semester grade is calculated as follows:

- Attendance, quiz and other class activities **10%**
 - Score will be checked via Google classroom
- Term Project(s) **20%**
- Midterm Examination **35%**

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|---------------------|--------------------|
| • Final Examination | 35% |
| Total | <u>100%</u> |

Course Policies

- The evaluation is based on **a *group reference***. The letter grades will be A, B+, B, C+, C, D+, D, or F.
- The following letter grades may also be given:
 - “I” Incomplete
 - “P” In progress
 - “W” Withdrawn
- I have right to adjust the grading system and course content depend on how the students perform.
- Use of cell phone or laptop in the classroom is permitted only for taking note and working on course-related activities.

Cheating Policies

Academic misconduct, a.k.a., cheating, is considered as a very serious offence in any classes. It is mainly due to that, it devalues the effort of honest students. Therefore, all suspected cases will be aggressively pursued, and the confirmed cases will be punished to the full extent permitted by the university.

Policy for cheating in the courses

- First offense will be resulted in zero score for the particular cheated assignment or exam.
- Multiple instances of cheating of any kind will resulted in receiving an F for the course.