

**1.Code and Course Title: IBP 1203 Business Statistics**  
**2.Credits: 3(3-0-6)**

### **IBP 1203 Business Statistics**

**Statistical methodology, descriptive statistics, inferential statistics and nonparametric Quantitative and qualitative analysis, probability concepts and probability distributions, sampling method, interval estimation and hypothesis testing, correlation and regression analysis.**

**Lecturers: Asst.Prof. Dr. Krongthong Khairiree and Mr. Luechai Tivrungsri**

#### **1: June 8, 21**

- Course Outline
- Pretest
- Statistics methods
- Statistics and Data Collection

#### **2: June 10, 2021**

- **Data presentation**
  - Histogram, frequency polygons and frequency Curve
  - Bar chart, Line graph, and Pie chart
  - Stem-and-leaf Plot
- **Data presentation using computer software program**

#### **3: June 15, 2021**

- **Population and Sample**
- **Data and data collection**
- **Introduction to Descriptive Statistics**
- **Measure of Central Tendency**
- **Stem and leaf Plot, Box Plot**
- **Data presentation using computer software program**

#### **4: June 17, 2021**

- **Measurement of dispersions:**
- **Standard deviation**
- **Variance**
- **Summation notation**
- **Data analysis using computer software program**

#### **5: June 22, 2021**

##### **Measurement of dispersions:**

- **Scatter diagram**
- **Coefficient of correlation**
- **Project Work Assignment**
- **Data analysis using computer software program**

#### **6: June 24, 2021**

- **Linear Regression**
- **Data collection**
- **Using Fathom or Excel for Regression**

#### **Week7**

- **Mid-Term Test**
- **Financial Literacy and FinTech**
- **Project Work assignment:**
  - **Statistics and Data Collection**
  - **Data analysis using software program**

### **7: June 29, 2021**

- **Mid-Term Test**
- **Financial Literacy and FinTech**
  - **Data analysis using software program**
- **Project Work assignment:**
  - Statistics and Data Collection
  - Data analysis using software program

### **8: Jul 1, 2021**

- **Probability and Tree diagram**
- **Conditional probability**
- **Project Work Assignments & Activities**

### **9: Jul 6, 2021**

- **Probability Distribution and Random variable**
- **Normal Distribution**
- **The Standard Normal Distribution**
- **Data analysis using software program**

### **10: Jul 8, 2021**

- Introduction to Inferential Statistics
- Sampling method,
- Sample size

### **11: Jul 13, 2021**

- Confidence Interval
- Estimation
- Data analysis using software program

### **12: Jul 15, 2021**

- Hypothesis Testing -1
- Students' Project Work Assignments & Activities

### **13: Jul 20, 2021**

- Hypothesis Testing -2
- Students' Project Work Assignments & Activities

### **14: Jul 22, 2021**

- Non-parametric -1
- Students' Project Work Assignments & Activities

### **15: Jul 27, 2021**

- Non-parametric -2
- Students' Project Work Assignments & Activities

## 16: Jul 29, 2021

- Mark up classes
- Problem-Based Learning and data collection
- Students' Project Work Assignments & Activities

## 17: Aug 3, 2021

- Final Examination and
- Submission Project Assignment

### 3. Assessment

1. Attendance, Ethics and Personality	10%
2. Assignments	40 %
○ Assignments and Activities (20%)	
○ Project Assignments (20%)	
3. Midterm Test	20%
4. Final Examination	30%

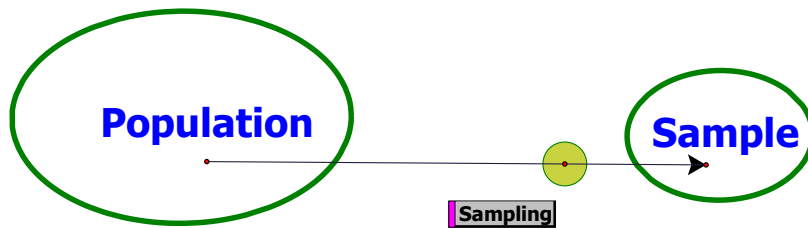
**Pretest**

**1 hour**

## Statistical Concepts

**Population** is the group of all items of interest.

**Sample** is a set of data drawn from the population.



A conclusion drawn about a population based on the information in a **sample** from the **population** is called a **Statistical Inference**.

**Data: observed values of a variable**

**data**

**Numbers**  
**10,35,79**



**wording**



## **Primary sources of data**

- 1. Survey:** interview, questionnaires i.e., people are asked about their beliefs, behaviours, and other characteristics.
- 2. Observation:** observing and recording behaviour as it happens during the period of observation.
- 3. Experiment:** use of experimental and control groups. At least one causal variable is manipulated, normally experimental design are used in product testing.

## **Data presentation**

- 1. Bar chart, Line graph, and Pie chart**
- 2. Histogram, Frequency polygons and Frequency Curve**
- 3. Stem-and-leaf Plot**
- 4. Box Plot**

## **COVID-19 Statistics: Data Presentation**

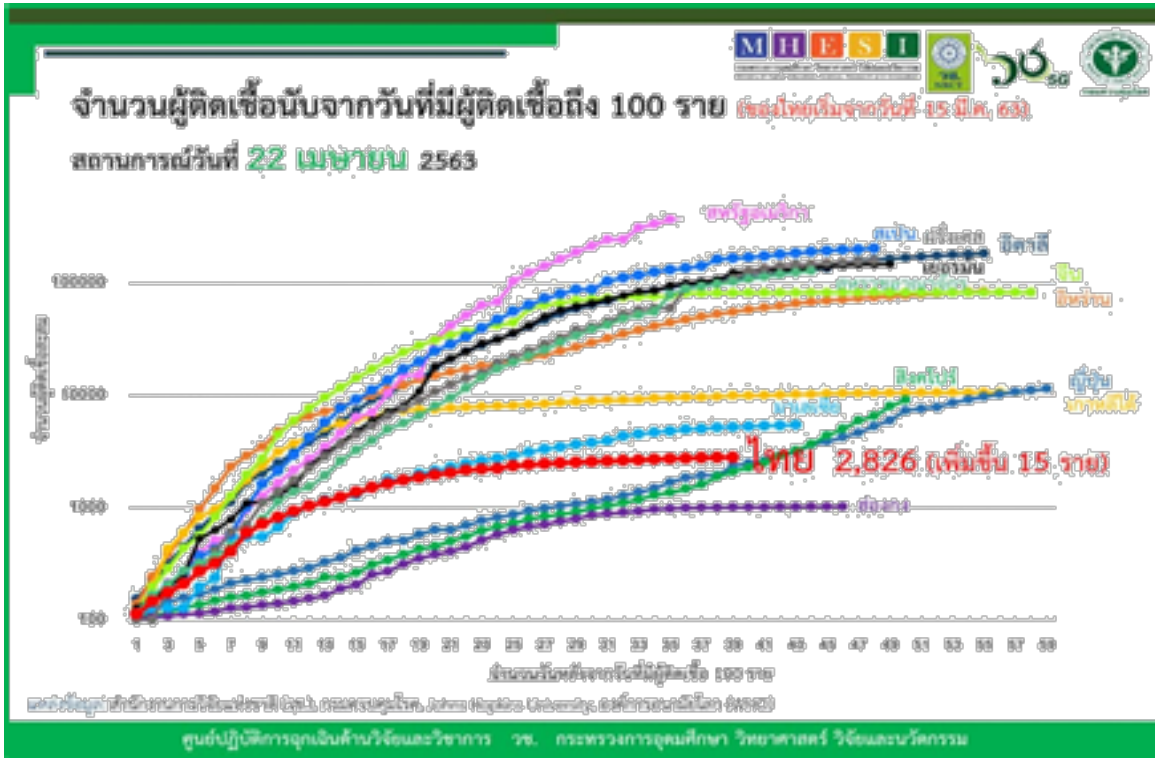


**Coronavirus-2019/situation-reports**

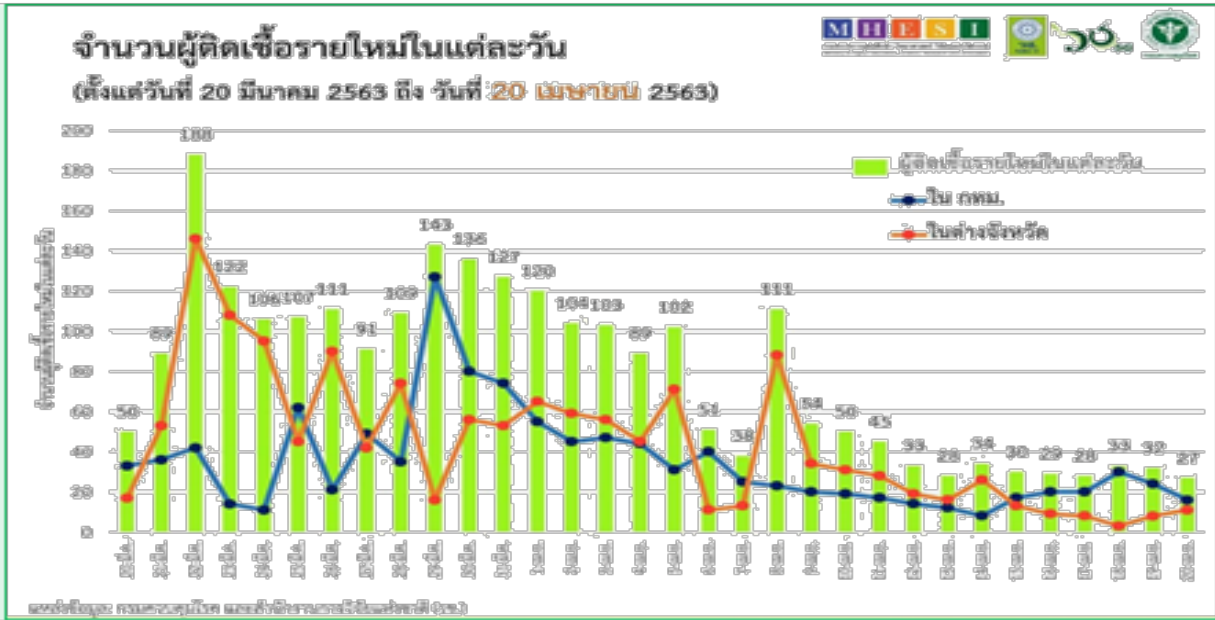
**<https://www.who.int/thailand/health-topics/coronavirus>**



**1. Dot plot graph presentation of COVID-19 cases in Thailand. Retrieved from <https://www.mhesi.go.th/home/index.php/pr/covid-19>, date April 23, 2563.**

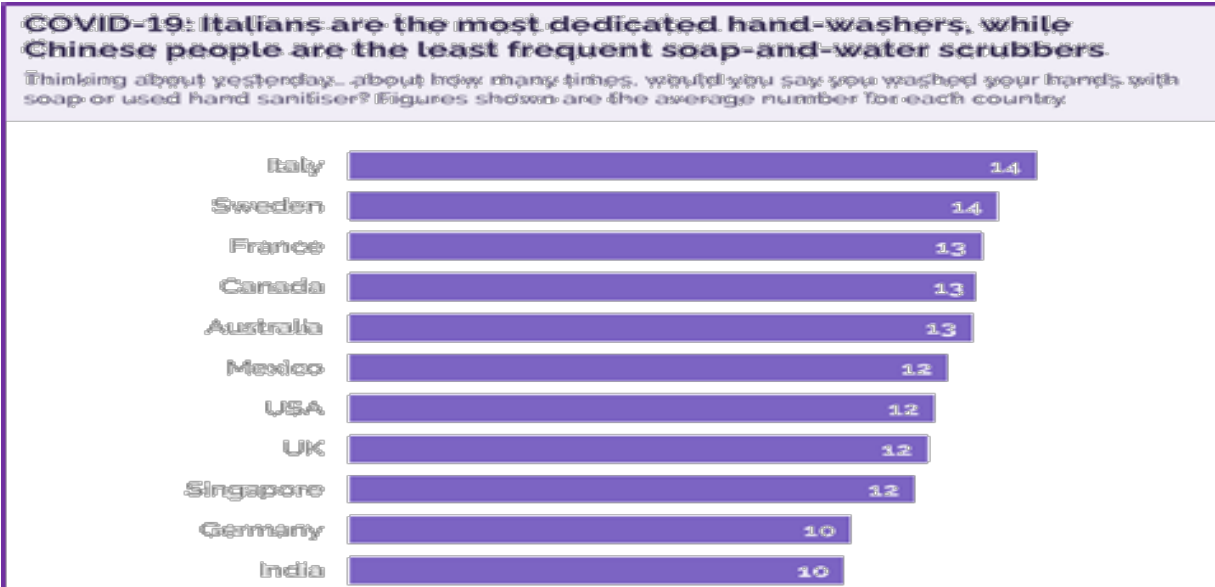


## 2.Data presentation of COVID -19 Cases in Thailand.



3. The international study of more than 14,000 people across 13 countries—conducted by YouGov and the Institute of Global Health Innovation at Imperial College London—tracks about the COVID-19. The charts below show how people are responding to coronavirus.

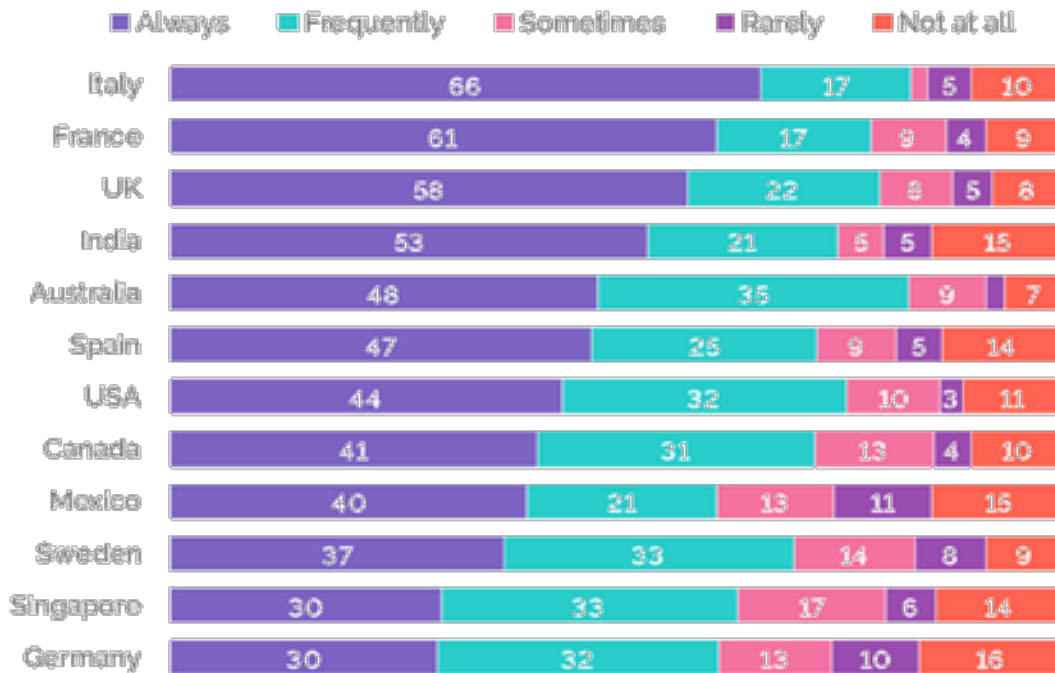
### How often do you wash your hands each day?



## Social and physical distancing: Self-Isolate.

### Among those suffering potential COVID-19 symptoms, Germans and Singaporeans have been the least likely to self-isolate

Since developing those symptoms, to what extent have you self-isolated yourself on each of the following 7 days? % of those who reported any of the following symptoms: dry cough, fever, loss of sense of smell, loss of sense of taste, shortness of breath or difficulty breathing.



### Forming Groups:

1. Students form a group of **2-4** persons per group;
2. Each group select only one topic from the following topics:
  - 2.1 COVID-19 cases in your Province/State ;
  - 2.2 COVID-19 cases in any Countries;
  - 2.3 How your friends are responding to coronavirus?
    - o Hands wash with soap and running water
  - 2.4 How your friends are responding to coronavirus?
    - o Social and physical distancing: Self-Isolate, or
    - o Wearing mask

