**SCCH 159/169/189 Chemistry Laboratory**

**Friday: 1.30 - 4.20 p.m.**  **Lab room: SC4-300, SC4-304 and SC4-400**

**Course Coordinator:** Asst. Prof. Dr. Manthana Jariyaboon

(manthana.jar@mahidol.ac.th, manthana.jar@mahidol.edu)

**Instructors:** Asst. Prof. Dr. Manthana Jariyaboon

Asst. Prof. Dr. Chayanisa Chitichotpanya

Assoc. Prof. Dr. Supa Wirasate

Assoc. Prof. Dr. Siwaporn Meejoo Smith

**Lab Supporting Staff**: Miss Prapassorn Pitthayanurak

**Google Classroom Class code: SCCH 159 (EN) /169 (EG) /189 (SC) : owqhb7u**

**All students should join google classroom by 13th Aug 2021. Please use MAHIDOL.EDU account only.**

**All announcements will be made via google classroom.**

**Course Learning Outcome (CLO)**

By the end of the course, students who successfully complete the course will be able to:

1. CLO1 Perform basic techniques related to the qualitative and quantitative analysis used in the general and organic chemistry laboratory correctly.

2. CLO2 Explain the chemical principles behind each experiment correctly.

3. CLO3 Perform and observe phenomena during doing experiment and conclude the hypothesis of each experiment correctly.

4. CLO4 Analyze and discuss the meaning of data from each experiment via group report writing.

5. CLO5 Follow safety regulation in the chemistry laboratory, and adhere to safe working practices.

6. CLO6 Communicate the knowledge gained appropriately in written form.

7. CLO7 Collaborate and work efficiently with team to reach common goals

**Table 2 Lab schedule (online)**

| **Online (20 Aug – 1 Oct)** | | | | |
| --- | --- | --- | --- | --- |
| **Date** | **Topic** | **Studying Method** | **Instructor** | **TA** |
| 20 Aug | **0.** Orientation  **1.** Lab Safety | Live via Zoom | 1. Dr. Manthana  Jariyaboon  2. Dr. Chayanisa Chitichotpanya  3. Dr. Supa Wirasate  4. Dr. Siwaporn Meejoo Smith | Gr. 1  1. Ms. Rosabiela Irfa Andina  2. Mr. Chaksawat Sangawitayakorn  3. Ms. Nantaporn Surachaitanawat  4. Mr. Myo Zin Tun  Gr2  1. Mr.Arkorn Chotiyasilp  2. Ms.Mintra Tongdee  3. Ms.Khusnul Ilmiah  4. Mr.Dian Yulianto  Gr. 3  1. Mr.Cing Suan Khual  2. Ms. Apinya Obma  3. Mrs. Kaleeswari Kalimuthu  4. Mr. Kwanchai Penpong |
| 27 Aug | **2.** Stoichiometry and Precision |
| 3 Sep | **3.** Rate of reaction between iodine and acetone |
| 10 Sep | **4.** Recrystallization of Aspirin |
| 17 Sep | **5.** Thermogravimetric analysis of biomass solid fuel |
| 24 Sep | No class (Mahidol Day) |
| 1 Oct | Quiz (Topic no. **1-5**) |
| 4-8 Oct | No class and no exam (Mid-term exam week) |

**Table 3 Lab schedule (onsite)**

| **On-site (15 Oct – 26 Nov)** | | | | **Note**  **If on-site class cannot be arranged.** |
| --- | --- | --- | --- | --- |
| **Date** | **Topic** | **Instructor** | **TA** |
| 15 Oct | **6.** Enthalpy of reaction | 1. Dr. Manthana  Jariyaboon  2. Dr. Chayanisa Chitichotpanya  3. Dr. Supa Wirasate | SC4-400  1. Ms. Rosabiela Irfa Andina  2. Mr. Chaksawat Sangawitayakorn  3. Ms. Nantaporn Surachaitanawat  4. Mr. Myo Zin Tun  SC4-404  1. Mr.Arkorn Chotiyasilp  2. Ms.Mintra Tongdee  3. Ms.Khusnul Ilmiah  4. Mr.Dian Yulianto  SC4-300  1. Mr.Cing Suan Khual  2. Ms. Apinya Obma  3. Mrs. Kaleeswari Kalimuthu  4. Mr. Kwanchai Penpong | - They will be changed to online class. |
| 22 Oct | No class (Compensatory holiday in substitution of Chulalongkorn Day ) |
| 29 Oct | **7.** Titration Technique:  A. Standardization of NaOH with potassium hydrogenphthalate as a primary standard  B. Determination of the acetic acid content in vinegar |
| 5 Nov | No class (Mahidol Vichakarn) |
| 12 Nov | **8.**Thin-layer Chromatography  of Analgesic drugs and Vegetables |
| 19 Nov | - Practice before Practical Exam |
| 26 Nov | - Practical exam  - Check & Return glassware |