



## **Sterilization Sciences Course (English) Module II**

2<sup>nd</sup> May 2024

### **Introduction**

Being the winner of the 2023 Outstanding Social Caring Organization Award, Hong Kong Sterile Services Management Association (HKSSMA) commits to cultivate competent professionals in the field of sterilization sciences. To assure quality and safe hospital sterilization services to the community, the Sterilization Science Academy under HKSSMA not only trains up the professional locally, but also shares experience with overseas delegates and further strengthen the professionalism in the sterilization field. The Sterilization Sciences Course is designed for enrichment of participants' advanced concepts on decontamination sciences; enhancement of participants' awareness of international standards; mastering evolving technologies and understanding the best practices to maintain standard in Sterile Supply Services.

### **Objective**

Upon completion the module II of sterilization sciences course, participants are expected to be able to understand:

1. The sciences behind steam sterilization
2. The importance of water quality for steam sterilization
3. Various monitoring methods for sterilization processes
4. Components of a steam sterilizer and validation
5. Construction and environmental monitoring of a Modern Central Sterile Supply Department
6. Application of Theoretical Concepts in Advanced Decontamination Sciences in Daily Practice
7. Development of Quality Management System in Sterile Supply Services
8. Store and Supply Management

### **Course Module and Date**

The Sterilization Sciences Course (English) comprises of 2 modules. Each module will be organized every year to polish up the competence of sterile services professionals. This module II is last for 3 days from 4<sup>th</sup> to 6<sup>th</sup> September, 2024.

### **Venue**

Panda Hotel is situated at 3 Tsuen Wan Street, Tsuen Wan, Hong Kong, China

### **Language Medium**

English



### **Target Participants and Class Size**

The course is designed for both local and overseas nurses, staff working in hospitals or in sterilization field. The class size is around 70.

### **Lecturers**

#### **Dr. Gerhard KIRMSE**

- Director Technical Competence Center; Dr. Ing.

#### **Mr. Samuel Tat Hong LAW**

- HKSSMA Chairman / Course Advisor, RN, BN, FSERA®
- A Fellow of Social Enterprise Research Academy

#### **Mr. Teddy Chun Kin LEE**

- HKSSMA vice-Chairman, RN, BN, MN

#### **Ms. Queenie Wai Leng CHAN**

- HKSSMA Secretary, RN, BN, Fellow of Hong Kong Academy of Nursing
- Shenzhen Hospital Accreditation Research Center (SHARC) International Hospital Quality Accreditation Standards (2021 Version) Surveyor 2023

#### **Mr. Chin Ching LEE**

- HKSSMA Director of Publication, RN, BSN, MN

### **Continuing Nursing Education (CNE) Points**

Total contact time is 18 hours per module with 18 CNE credit points to be awarded for each module

### **Award of Certificate**

Participants must attend 75% of the theoretical lecture.

Certificate of attainment will be issued to participants who have completed the course and obtained satisfactory result in the course assessment.

### Course Fees for Each Module (3 days)

1. Registration fees

|                                                | HKSSMA member | Non HKSSMA member |
|------------------------------------------------|---------------|-------------------|
| Early birds (Before 30 <sup>th</sup> Jun 2024) | HK \$4,200    | HK \$4,500        |
| Standard (After early bird)                    | HK \$4,500    | HK \$4,800        |

2. The early bird enrollment deadline is set on **30<sup>th</sup> Jun 2024**. The course registration will be closed on **31<sup>st</sup> Jul 2024**. Registration is first come first served. Those who completed the module I in last year, will have priority for early bird enrollment.
3. Course fee including hotel lunch and coffee breaks for 3 days but excluding hotel accommodation.
4. Registration fee and hotel booking fee are neither transferable nor refundable.
5. Delegates can reserve hotel accommodation with breakfast after course registration by clicking the link given in the confirmation email.
6. For sharing of hotel room, only one delegate needs to reserve the hotel accommodation and adds the name of room-mate. The passport name should be used to hotel reservation.

### Course Enquiry

Any enquiry should be addressed to the Mr. Samuel LAW at [lawthsamuel@hkssma.org](mailto:lawthsamuel@hkssma.org)

### Online Registration

For course registration, please click the following hyperlink.

<https://www.hkssma.org/education/academy/sterilization-sciences-course-english-module-ii/>

Course registration will be closed once the class quota is full.

## Course Curriculum

### Module II – Steam kinetics, clean steam system, steam sterilization and validation, Quality Management System, Supply and Store Management, Research Study, Planning and construction of CSSD

| Date                                  | Time          | Day 4 Topic                                                                                                                                                                                                                                                                                    | Speaker                 |
|---------------------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Wednesday<br>4 <sup>th</sup> Sep 2024 | 09:00 – 09:15 | ✚ Introduction and course overview                                                                                                                                                                                                                                                             | Mr. Samuel Tat Hong LAW |
|                                       | 09:15 – 10:15 | ✚ Steam kinetics & physical properties<br>➤ Specific heat capacity<br>➤ Latent heat and change of state<br>➤ Ideal Gas Law<br>✚ Mechanism of steam sterilization<br>✚ Saturated steam                                                                                                          | Mr. Samuel Tat Hong LAW |
|                                       | 10:15 – 10:45 | Tea Break                                                                                                                                                                                                                                                                                      |                         |
|                                       | 10:45 – 11:35 | ✚ Theory of Steam Sterilization<br>✚ The Imagination Micro-organism concept<br>✚ The Overkill principle<br>✚ Log Reduction Concept<br>✚ D-value, Z-value & F <sub>0</sub> value<br>✚ Thermal Death Curve<br>✚ Sterility Assurance Level (SAL)<br>✚ Critical parameters in steam sterilizations | Mr. Chin Ching LEE      |
|                                       | 11:35 – 11:45 | Tea Break                                                                                                                                                                                                                                                                                      |                         |
|                                       | 11:45 – 13:00 | ✚ Water quality and steam quality for steam sterilization<br>✚ Clean Steam<br>✚ Deaeration of reverse osmosis water<br>✚ Design and construction of steam supply system                                                                                                                        | Mr. Samuel Tat Hong LAW |
|                                       | 13:00 – 14:00 | Lunch                                                                                                                                                                                                                                                                                          |                         |
|                                       | 14:00 – 15:15 | ✚ Components of steam sterilizer<br>✚ Type of steam sterilizer<br>✚ Type of Sterilization Cycles<br>✚ Dilution Factor<br>✚ Physical mechanism throughout steam sterilization processes                                                                                                         | Mr. Chin Ching LEE      |
|                                       | 15:15 – 15:45 | Tea Break                                                                                                                                                                                                                                                                                      |                         |

|                                      | 15:45 – 17:00 | <ul style="list-style-type: none"> <li>✚ International standards for steam sterilizer EN 285</li> <li>✚ Source of Non-condensable gas</li> <li>✚ Air removal and Steam Penetration</li> <li>✚ Air detector</li> <li>✚ Hollow load test</li> <li>✚ International standards for steam sterilizer EN 285</li> <li>✚ Air removal and Steam Penetration</li> </ul> | Mr. Samuel Tat Hong LAW |
|--------------------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Date                                 | Time          | Day 5 Topic                                                                                                                                                                                                                                                                                                                                                   | Speaker                 |
| Thursday<br>5 <sup>th</sup> Sep 2024 | 09:00 – 09:15 | ✚ Course Recap                                                                                                                                                                                                                                                                                                                                                | Mr. Samuel Tat Hong LAW |
|                                      | 09:15 – 10:15 | <ul style="list-style-type: none"> <li>✚ Routine monitoring and control of steam sterilization</li> <li>✚ Process Challenge device</li> <li>✚ Process Monitoring System</li> <li>✚ Classification of Chemical indicators</li> <li>✚ Issues on Biological indicators</li> </ul>                                                                                | Mr. Samuel Tat Hong LAW |
|                                      | 10:15 – 10:45 | Tea Break                                                                                                                                                                                                                                                                                                                                                     |                         |
|                                      | 10:45 – 11:35 | <ul style="list-style-type: none"> <li>✚ Validation of steam sterilizer and sterilization process</li> <li>✚ Automatic control test</li> <li>✚ Thermo-metric test (small load, full load)</li> <li>✚ Load Dryness test</li> <li>✚ Validation of new sterile set</li> </ul>                                                                                    | Mr. Teddy Chun Kin LEE  |
|                                      | 11:35 – 11:45 | Tea Break                                                                                                                                                                                                                                                                                                                                                     |                         |
|                                      | 11:45 – 13:00 | <ul style="list-style-type: none"> <li>✚ Validation test for steam sterilizer ISO 14937</li> <li>✚ Steam quality</li> <li>✚ Steam Non-condensable Gas Test</li> <li>✚ Steam dryness test</li> <li>✚ Steam Superheat Test</li> </ul>                                                                                                                           | Mr. Samuel Tat Hong LAW |
|                                      | 13:00 – 14:00 | Lunch                                                                                                                                                                                                                                                                                                                                                         |                         |
|                                      | 14:00 – 15:15 | <ul style="list-style-type: none"> <li>✚ Procurement and Material Management in CSSD</li> <li>✚ Supply Chain management</li> <li>✚ Store and Supply Management</li> </ul>                                                                                                                                                                                     | Mr. Teddy Chun Kin LEE  |
|                                      | 15:15 – 15:45 | Tea Break                                                                                                                                                                                                                                                                                                                                                     |                         |
|                                      | 15:45 – 17:00 | ✚ Research Study on Bowie Dick Test                                                                                                                                                                                                                                                                                                                           | Mr. Samuel Tat Hong LAW |

| Date                               | Time          | Day 6 Topic                                                                                                                                                                    | Speaker                   |
|------------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Friday<br>6 <sup>th</sup> Sep 2024 | 09:00 – 09:15 | ✚ Course Recap                                                                                                                                                                 | Mr. Samuel Tat Hong LAW   |
|                                    | 09:15 – 10:15 | ✚ Planning and construction of CSSD<br>✚ Health Building Note 13                                                                                                               | Mr. Samuel Tat Hong LAW   |
|                                    | 10:15 – 10:45 | Tea Break                                                                                                                                                                      |                           |
|                                    | 10:45 – 11:35 | ✚ Quality Management System ISO 13485<br>✚ Tracking and Tracking System                                                                                                        | Ms. Queenie Wai Leng CHAN |
|                                    | 11:35 – 11:45 | Tea Break                                                                                                                                                                      |                           |
|                                    | 11:45 – 13:00 | ✚ Risk Management<br>✚ Near Missed Case Management<br>✚ Continue Quality Improvement<br>✚ Prevention of Wet Load                                                               | Mr. Samuel Tat Hong LAW   |
|                                    | 13:00 – 14:00 | Lunch                                                                                                                                                                          |                           |
|                                    | 14:00 – 15:00 | ✚ Environmental requirements<br>✚ Segregation of dirt and clean<br>✚ Segregation of sterile and un-sterile<br>✚ Clean room ISO 14644<br>✚ Environmental Control and validation | Ms. Queenie Wai Leng CHAN |
|                                    | 15:00 – 15:30 | Tea Break                                                                                                                                                                      |                           |
|                                    | 15:30 – 16:00 | ✚ Course Assessment                                                                                                                                                            | Mr. Samuel Tat Hong LAW   |
|                                    | 16:00 – 16:15 | Tea Break                                                                                                                                                                      |                           |
|                                    | 16:15 – 17:00 | ✚ Course Evaluation<br>✚ Question and Answer<br>✚ Group Photo                                                                                                                  | Mr. Samuel Tat Hong LAW   |

**Note: The course curriculum may be changed without prior notice.**