



CMBEC45 Continuing Education Program

Course Name	Date	Time	Course Duration
3D Printing and 3D Scanning applications in Biomedical Engineering	May 16 th , 17 th and 18 th (choose one session)	10:00 - 10:15 Walk to BCIT 10:15 - 11:45 Course 11:45 - 12:00 Walk to Hotel	1.5 hours
Hands-on workshop: from 3D models to 3D printed parts	May 16 th , 17 th and 18 th (choose one session)	1:15 - 1:30 Walk to BCIT 1:30 - 3:00 Course 3:00 - 3:15 Walk to Hotel	1.5 hours
Network Essentials for Medical Devices	May 16 th	10:45 -12:15, 1:30 - 3:00	3 hours
Cybersecurity in Healthcare, Securing the healthcare environment.	May 17 th	10:30 – 12:30	2 hours
Philips Ventilator Workshop	May 17 th	1:30 - 3:00, 3:30 – 5:00	3 hours
How to plan for and future proof your next Digital Operating Theater Integration Project, while accommodating all relevant stakeholder requirements?	May 18 th	8:30 – 10:30	2 hours
Incident Investigation Workshop	May 18 th	10:30-12:00	1.5 hours
Evolution of Healthcare Technology Management	May 18 th	1:40 - 2:40	1 hour



3D Printing and 3D Scanning applications in Biomedical Engineering

Company: British Columbia Institute of Technology

Course Codes: CE1 (May 16th), CE5 (May 17th), CE8 (May 18th)

Duration: 1.5 hours

Participants: 24 maximum per session

Date and Time:

May 16th, 17th and 18th

10:00am – 10:15am Walk to BCIT

10:15am – 11:45am Course

11:45am – 12:00pm Walk to Hotel

Please email organizer.cmbec@gmail.com if you require transportation assistance.

Name of Instructor: BCIT MediaWorks

Requirements: Note: this session is held at BCIT's downtown campus at 555 Seymour St, on the second floor in the Tech Collider learning center space, room 261.

Description: Participants will be introduced to 3D printing and 3D scanning technologies, with emphasis placed on applications in the Biomedical engineering field.

We will begin with an overview of the working principal of different 3D printing technologies. This will be followed by discussion on the pros and cons of the different types of printer and materials commonly available. There will also be a discussion on where and how to acquire the 3D models.

The workshop will include a live demonstration of 3D scanning of a common lab component and 3D printing.



Hands-on workshop: from 3D models to 3D printed parts

Company: British Columbia Institute of Technology

Course Codes: CE2 (May 16th), CE6 (May 17th), CE9 (May 18th)

Duration: 1.5 hours

Participants: 10 maximum per session

Date and Time:

May 16th, 17th and 18th

1:15pm – 1:30pm Walk to BCIT

1:30pm – 3:00pm Course

3:00pm – 3:15pm Walk to Hotel

Please email organizer.cmbec@gmail.com if you require transportation assistance.

Name of Instructor: BCIT MediaWorks

Requirements: Note: this session is held at BCIT's downtown campus at 555 Seymour St, on the second floor in the Tech Collider learning center space, room 272.

Description: Participants will be guided through the process to 3d print a part on an Ultimaker 3D printer. Participants will learn to acquire, modify and repair 3d models. We will be focusing on simple modelling and modifying existing models in TinkerCad. We will also show participants how to repair and clean up the 3D scanned model demo'd in the morning session.

We will then learn to prepare the 3D model for printing using Cura slicer.

Participants will each leave with a 3d printed part.

Computers will be provided, but participants are welcome to bring their own laptop and work.



Network Essentials for Medical Devices

Company: Biomedical Engineering Technology, School of Health Sciences, BCIT

Course Code: CE3

Duration: 3 hours

Participants: 20 maximum

Date and Time: May 16th, 10:45am – 12:15pm,
& 1:30pm – 3:00pm

Name of Instructor: Jenny Jin

Requirements: Windows 10 Laptop with both Ethernet Port and Wi-Fi capability

Description: This session will focus on the Fundamentals of Ethernet and Wireless communication in health care environment. The participants will build Local Area Networks (LANs) of computers and medical devices. Network Segmentation, including Subnet and VLAN, will be discussed and demonstrated.



Tech Talk: Cybersecurity in Healthcare: Securing the healthcare environment

Company: GE HealthCare

Course Code: CE4

Duration: 2 hours

Participants: 30 maximum

Date and Time: May 17th, 10:30am – 12:30pm

Name of Instructor: James Rizzo

Requirements: n/a

Description: Cybersecurity is a fact of life on a personal and business level. However, Healthcare providers have special challenges keeping a safe and protected environment for healthcare data and systems. In this tech talk we will cover some of the cybersecurity threats & challenges unique to healthcare along with some strategies to address these risks.



PHILIPS

Philips Ventilator Workshop

Company: Philips

Course Code: CE7

Duration: 3 hours

Participants: 30 maximum

Date and Time: May 17th, 1:30pm – 3:00pm,
& 3:30pm – 5:00pm

Name of Instructors:

- Melany Grondin (Clinical Specialist, Respiratory Therapist)
- Yannick Martin (Technical Training Leader, Ventilator)

Requirements: n/a

Description: This workshop will cover both clinical and technical aspects on ventilator. (here some examples of the items we will cover during this workshop)

- Clinical aspects
 - Mechanics of ventilation
 - Invasive vs non-Invasive ventilation
 - Single vs dual limb
 - Ventilation mode pro and con
- Technical aspects
 - Electronics, parts, diagrams
 - Preventive maintenance
 - Troubleshooting
 - Q&A

Yannick is a Technical Training Leader with extensive knowledge to share from his biomedical experience, and Melany is a Clinical Specialist/Respiratory Therapist who will share her clinical expertise.

2023 CMBES
CONFERENCE



Vancouver, BC
May 16-18, 2023

STORZ

KARL STORZ—ENDOSKOPE

How to plan for and future proof your next Digital Operating Theater Integration Project, while accommodating all relevant stakeholder requirements?

Company: Karl Storz

Course Code: CE10

Duration: 2 hours

Participants: 30 maximum

Date and Time: May 18th, 8:30am - 10:30am

Name of Instructor: Mohamed Ahmed & Zoel Le Blanc

Requirements: n/a

Description: With the changes, advancements and future requirements in video technology (4K, ICG, VR, 3D even 8K, and then EMR) it is becoming a challenge to ensure that products purchased today will not be obsolete next year. In order to do so, someone must understand not only current requirements but also what is on the horizon. Measures must be taken to ensure that large investments such as OR Integration, not only meet today's requirement but also don't lock your Institution out of future technology or requirements.

This all said, OR Integration is not a "one size fits all" solution, you need to understand both your own requirements as well as what is currently available. During my workshop and presentation we will explore these various options and hopefully you will come out of this with not only a better appreciation for OR Integration and many of its benefits but also a better understanding of how OR integration fits within your own institution and requirements.



LOWER MAINLAND BIOMEDICAL ENGINEERING

Incident Investigation Workshop

Company: Lower Mainland Biomedical Engineering

Course Code: CE11

Duration: 1.5 hours

Participants: 30 maximum

Date and Time: May 18th, 10:30am - 12:00pm

Name of Instructor: Matthew F. Baretich, P.Eng., Ph.D.

Requirements: n/a

Description: Somewhere in the hospital someone gets hurt. Was a medical device at fault? This workshop steps through the process of investigating incidents like that. There will be discussion and interaction, so bring your experience to the workshop. Extended examples include uncontrolled movement of an OR table and a series of infusion pump over-infusion events.

Matt Baretich is a clinical engineer with many years of experience investigating medical device-related incidents in Canada and the United States. He writes and teaches widely on incident investigation and other HTM activities.



Evolution of Healthcare Technology Management

Company: GE HealthCare

Course Code: CE12

Duration: 1 hour*

Participants: 30 maximum

Date and Time: May 18th, 1:40pm - 2:40pm

Name of Instructor: Ron Rivard

Requirements: n/a

Description: Medical Technology across the hospital enterprise is becoming more challenging to support and adding additional complexity to the work of Biomedical Technologists and Engineers. In this session, participants will be able to see firsthand how technology has evolved over the years in addition, learn best practices that will help simplify your daily tasks while leveraging insightful data.