



The Canadian Association of Neurophysiological Monitoring (CANM) Intraoperative Neurophysiological Monitoring (IONM) Education Program

Program Overview

The Canadian Association of Neurophysiological Monitoring (CANM) is pleased to launch the online *CANM IONM Education Program*, a four-course series covering spine, cranial nerve, brain, and brainstem monitoring, along with other essential IONM topics.

With rolling enrollment, participants can begin anytime, gaining foundational knowledge in a flexible, self-directed format. Participants who successfully complete all four courses will receive a *Certificate of Completion – CANM IONM Education Program*.

Who should enroll

The CANM IONM Education Program is designed primarily for new hires and early-career professionals seeking to build a strong foundation in this specialized field. It provides structured, progressive learning focused on core concepts in neurophysiology, instrumentation, and intraoperative application, helping neuromonitorists contextualize what they encounter in the operating room. The program is intended to supplement clinical experience by offering a consistent educational framework for developing knowledge and practical understanding.

Individuals considering a future career in IONM are welcome to enroll and are encouraged to check with local hospitals regarding entry-to-practice and employment requirements. Some content may be challenging without hands-on clinical experience.

Course 1: CANM 110 — Modalities for Spine Procedures

This is the first of four courses and provides a comprehensive introduction to IONM in spinal surgery through 12 modules. The course covers spine anatomy, surgical procedures, and core electrophysiology concepts, including somatosensory and motor evoked potentials (SSEPs and MEPs) and EMG techniques, giving participants the foundational knowledge to apply IONM in the operating room.

Course 2: CANM 120 — Spinal Cord, Tethered Cord and Peripheral Nerve Monitoring

This course expands on foundational IONM skills by exploring both pediatric and adult spinal monitoring, D-wave techniques, peripheral nerve conduction studies, and EMG. Participants gain a deeper understanding of how anesthesia affects neural signals, as well as instrumentation, signal processing, and troubleshooting strategies, equipping participants with the ability to evaluate complex data in real time.

Course 3: CANM 130 — Cranial Nerve and Brainstem Monitoring

This course offers an in-depth exploration of IONM during neurosurgery, focusing on the cranial nerves and brainstem. Participants will learn to interpret BAEPs, cranial nerve EMG and MEPs, and EEG, while applying evidence-based approaches. The course also covers essential risk management and legal considerations relevant to IONM practice, and includes content on research design, evidence-based practice, and critical analysis of the literature, providing learners with a thorough understanding of IONM.

Course 4: CANM 140 — Brain Stimulation and Neurovascular Monitoring

This course provides an advanced exploration of intraoperative neurophysiology, focusing on cutting-edge techniques for cortical monitoring. Participants will gain practical knowledge on deep brain stimulation, cortical and subcortical mapping, electrocorticography, and multimodality monitoring. The course also covers neuroimaging, neuronavigation, and the latest methods for assessing the brain and spinal cord during surgery, providing learners with a thorough understanding of IONM.

Enrollment and Evaluation

Enrollment is open year-round. For each course, participants have four months (from their enrollment date) to access the course material and complete the 12 module quizzes. Each quiz contains 20 multiple-choice questions and may be attempted **only once**. A **minimum cumulative final grade of 70%** is required to successfully pass the course before moving onto the next course.

Disclaimer

CANM has supported IONM education and professional development in Canada since its inception in 2008. The *CANM IONM Education Program* is offered as an educational initiative; decisions regarding employment qualifications or training requirements are determined independently by healthcare institutions and employers.