NEUROTECH

Ethical Considerations in Neurotech

Queen's UNIVERSITY
Centre for Neuroscience Studies

NTMC
NEUROTECH MICROCREDENTIAL PROGRAM

In this hybrid interdisciplinary course, learners apply a bioethics lens to evaluate applications of neurotechnologies across the medical and consumer sectors, and how they may be co-opted for use by organizations such as the military, workplaces, and schools. Learners attend bi-weekly tutorials and complete 4 asynchronous online modules:

Module 01
Intro to Neurotech and Neuroethics

An introductory module to the basics of neuroscience, neurotechnology, and the TALES neurotech impact assessment framework

Module 02
Medical Neurotech

Explore fundamentals of medical neurotechnology then analyze case studies using TALES (portable MRI, visual neuroprosthetics).

Module 03
Consumer Neurotech

Explore fundamentals of consumer neurotechnology then analyze case studies using TALES (direct-to-consumer EEG and tDCS)

Module 04
Organizational Use of Neurotech

Explore contemporary and anticipatory examples of neurotech usage mandated by organizations, then use TALES to analyze case-studies (workplace neuroimaging)

Timeline

Course must be completed in
12 weeks

Completing course takes approximately
50 hours

Tech Requirements

Regular access to a computer and a stable internet connection

Compatible internet browser (Google Chrome is recommended)

Recommmended Prerequisites

Neuroscience and Neurotech Primer Microcredential.
and/or
Enrolled in or graduated from some post-secondary education

Learning Outcomes

1. Differentiate between the different neurotechnologies and their use cases.
2. Using the TALES impact assessment framework, evaluate the legal, ethical, and social considerations related to medical devices, consumer devices, and the mandated use of neurotech by organizations.
3. Critically evaluate anticipatory/speculative considerations about neurotech applications.
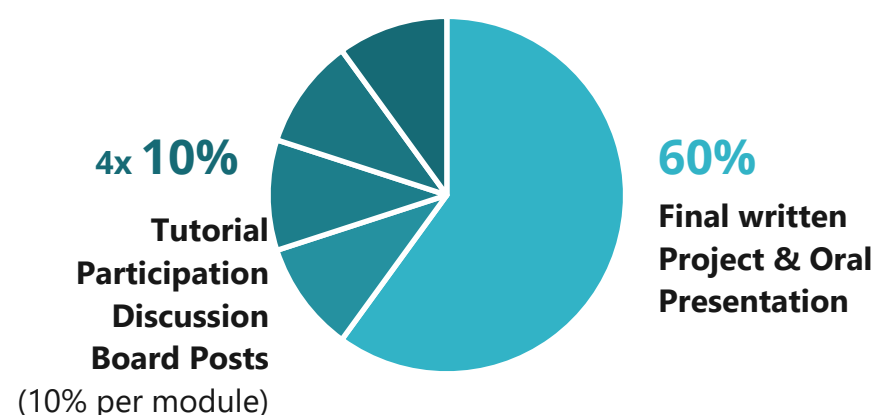
T Technology **A** Analysis **L** Legal **E** Ethics **S** Social

Assessments

A pass in this course requires achievement of an overall grade of 70%.

4x **10%**
Tutorial Participation Discussion Board Posts
(10% per module)

60%
Final written Project & Oral Presentation

Contact Information

Content and Accommodation Related Questions:
neurotech.microcredentials@queensu.ca

Health Sci Ed Connect (HSEC) Technology Support:
opdes.elearninghelp@queensu.ca

Certified through Accredible.

Linked in
Share your certification!

[recipient.name]

NTMC
NEUROTECH MICROCREDENTIAL PROGRAM

Ethical Considerations in Neurotech