Telecom, IoT & 5G

ICTC's WIL Digital Telecom, IoT & 5G e-Learning course introduces students to critical foundations of telecommunications and digital communication within major infrastructure pathways. This course will allow students to strengthen their understanding, while applying practical knowledge of telecom systems.

Modules		Lessons	Learning Objectives	
Module 1	Introduction to telecommunications	• History of telecommunications • Broadband communication • Trends in media consumption • Current role of telecommunications in our society • Main international organizations and key resources • Standards and technical fundamentals	• Analyzing the history of telecommunications, from classic networks to today's technologies	Padlet Discussion
Module 2	Internet of Things	• Fundamentals of IoT • IoT networks • Technology overview • Industrial applications	• Exploring the technologies for IoT networks, as well as main industrial applications	Padlet Discussion
Module 3	The 5G opportunity	• Wireless communications history • Intro to 5G • The promise of 5G	• Understanding the fundamentals behind 5G technologies and the potential opportunity	Quiz
Module 4	Business Applications	• Case study examples • Related technologies • SME interview	• Learning from industry cases and telecom-related implementations	Padlet Discussion
Module 5	Environmental and Societal Impact of the Telecom Industry	• Canada's digital divide • Equity: Internet as a human right • Telecom and UNI's Sustainable Development Goals (SDGs) • Cybersecurity and data sovereignty	• Exploring potential environmental and social impact of telecommunications systems	Padlet Discussion
Module 6	Canadian context and career opportunities	• Key Canadian actors • Vendor-led training and professional certifications • University and college training • Career opportunities and main roles in Telecom	• Learning about the main actors and related opportunities for telecom careers in Canada	Padlet Discussion

Canada