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.

<table>
<thead>
<tr>
<th>Modules</th>
<th>Lessons</th>
<th>Learning Objectives</th>
</tr>
</thead>
</table>
| 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 |
| 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 |
| 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 |
| Module 4 | Business Applications | • Case study examples  
• Related technologies  
• SME interview | • Learning from industry cases and telecom-related implementations |
| 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 |
| 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 |

Funded by the Government of Canada’s Student Work Placement Program (SWPP)