

Queensborough Community College – City University of New York
 Department of Youth & Community Development, Continuing Education and Workforce Development, Engineering
 Technology Department

5G Wireless Mobile Technician

Term	Summer 2022
Course contact hours	90 hours
Format	Hybrid
Pre-requisites	High School Diploma
Course schedule	Wednesday, Fridays from 3-6PM, and Saturdays 9AM-1:30PM

Description

5G Mobile Wireless Technician training course is part of an apprenticeship component. The course provides a background on general electronics and AC circuits, radio frequency (RF) fundamentals, RF spectrum, regulations, and RF components as part of a mobile communications system. The course also covers common digital communications schemes used in wireless infrastructure. RF testing and measurements are covered as part of chapter in best practices. Previous and current mobile technologies are covered with emphasis in fifth generation wireless.

Program outcomes

- Graduates will have an understanding the physical aspects of signal propagation in wireless infrastructure.
- Graduates will be able to differentiate mobile technologies currently deployed in the field, such as GSM, LTE and 5GNR.
- Graduates will have an understanding of site equipment and their operation as part of a mobile infrastructure implementation and safety requirements at job sites.

Topics covered¹

ET-MC-RF100.0	RF Fundamentals	Basic electronics relevant to communications RL, RC, RLC, network analysis and resonant circuits, RF spectrum, FCC regulations, RF devices, transmission lines, common modulation schemes, interference, RF instrumentation and measurements are covered.
ET-MC-MB100.0	LTE Fundamentals	LTE SAE architecture, air interface, physical layer, OFDMA, SC-FDMA, MIMO, and PIM are covered.
ET-MC-CA100.0	Cabling and Best Practices	Preparation, procedures and best practices for infrastructure project implementation are covered
ET-MC-MB200.0	5G Fundamentals	System architecture, air interface, physical layer, massive MIMO, beam forming, stand alone and non-standalone implementations are covered.
ET-MC-IF100.0	Industry Fundamentals	Real world case studies, career opportunities, iDAS, oDAS. Small cell, CBRS Private LTE.
ET-MC-BR100.0	Background Readiness	Non-technical requirements needed as part of a hiring process.
ET-MC-SF100.0	Safety in Mobile Communications	Guidelines for safety certifications required to work in the NYC market.

1. Curriculum is under continuous revisions and is subject to change
2. Additionally students will:
 - A. Receive a CPR Certification
 - B. Receive OSHA-30 Training (delivered online by 360Training)