GEORGE MASON UNIVERSITY

Volgenau School of Engineering

Where Innovation Is Tradition

About the MS in Telecommunications

The Masters of Science in Telecommunication at George Mason University offers a blend of cutten-edge practice-oriented courses in network engineering, cloud computing, wireless communications (e.g. 5G), and cyber security. This industry-oriented program is designed for students who wish to enter the field of networkengineering or are working in the field and want to advance their knowledge.

The program concentrates on practical applications of network engineering, rather than on a theoretical approach, while providing a thorough education in the necessary engineering principles. Hands-on laboratory courses provide students with practical skills and knowledge needed to hit the ground running after graduation.

Admission Requirements

Applications for the graduate program in Telecommunications must hold a Bachelors's degree from an accredited college or university in engineering, math, science, computer science, bussiness (with a quantitative background), economics, or other analytical disciplines, and students who have equivalent work experience indicating analytical aptitude.

Depending on background, some applicants may be required to complete 3 to 6 credits of preliminary coursework.

A GPA of 3.00 is usually required.

Master of Science in Telecommunications

George Mason University
4400 University Drive
Fairfax, VA 22030

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Graduate Degree and Certificate Program

The Masters of Science in Telecommunications requires the completion of 30 credit hours of approved graduate course work.

Additionally, following graduate certificate program are available which requires the completion of 15 credit hours of course work.

- Certificate in Advanced Networking Protocals for Telecommunications
- Certificate in Telecommunications Forensics and Security

Degree Requirments :
Students must complete 30 graduate credits consisting of a 21-credit required core component and a 9-credit elective component.

The MS in Telecommunications is a technical degree program that is accessible to students with technical or non-technical backgrounds.

Core Component (21 credits)

TCOM 500 Modern Telecommunications
TCOM 514 Basic Switching: Lecture and Laboratory Course
TCOM 515 Internet Protocol Routing: Lecture and Laboratory Course
TCOM 535 The TCP/IP Suite of Internet Protocols
TCOM 570 Network Automation
TCOM 610 Border Gateway Protocol (BGP) Routing
TCOM 750 Coordinating Seminar

Concentration: Network Technologies (NTEC)
Select 3 courses from the following:

TCOM 611 Multi-Protocol Label Switching (MPLS)
TCOM 614 Advanced Routing Lab
TCOM 616 Cloud Network Technologies
TCOM 617 Enterprise Network Architecture
TCOM 631 Voice Over IP

Concentration: Network Forensics and Security (NFSC)
Select 3 courses from the following:

TCOM 660 Network Forensics
TCOM 661 Digital Media Forensics
TCOM 663 Operations of Intrusion Detection for Forensics
TCOM 554 Incident Response Forensics

Concentration: Space Communication Systems
Select 3 courses from the following:

TCOM 551 Digital Communication Systems
TCOM 607 Satellite Communications
ECE 580 Small Spacecraft Engineering
ECE 660 Space System Engineering

Electives (9 Credits)

TCOM 551 Digital Communication Systems
TCOM 552 Introduction to Mobile Communications Systems
TCOM 607 Satellite Communications
TCOM 608 Optical Communications Systems
TCOM 611 Multi-Protocol Label Switching (MPLS)
TCOM 614 Advanced Routing Lab
TCOM 616 Cloud Network Technologies
TCOM 617 Enterprise Network Architecture
TCOM 631 Voice Over IP
TCOM 652 5G Service, Technology and Network
TCOM 660 Network Forensics
TCOM 661 Digital Media Forensics
TCOM 662 Advanced Secure Networking
TCOM 663 Operations of Intrusion Detection for Forensics
TCOM 664 Incident Response Forensics
TCOM 590 Selected Topics in Telecommunications
TCOM 690 Advanced Topics in Telecommunications
ECE 532 Secure Wireless Communications and Networks
ECE 542 Computer Network Architectures and Protocols
ECE 552 Big Data Technologies
ECE 643 Network Switching and Routing