

In-Residence Program with Flexible Start Dates

This three-course program is taught on the NPS campus in Monterey, CA, typically starting in the Fall. The elective can be taken anytime, though it is preferred that it comes before MA4404. Visit online for more details and requirements.

Program Prerequisite

Discrete Mathematics

(MA3025, MA2025, MA1025, or equivalent)



Required Curriculum

Graph Theory and Applications

(MA4027)

Structure and Function of Complex Networks

(MA4404)



And One Elective

Network Traffic Analysis (CS4558)

Network Flows and Graphs (OA4202)

Cooperation and Competition (MA4400)

Wireless Communications Network Security (EC4770)

Models of Conflict (DA4410)

Tracking and Disrupting Dark Networks (DA4600)

Research is an integral part of the Network Science Certificate and it is integrated in the required curriculum. Students will have an opportunity to develop classroom research for formal publication and have the option to explore network science thesis topics.

**"The world is a complex place.
We must embrace the complexity in our
scientific techniques or be irrelevant."**

*-Brigadier General (ret.) Chris Arney, PhD
Director, Network Science Center (U.S. Military Academy)*

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The First Network Science Certificate Program

...In The U.S.

- Computer Networks
- Social Networks
- Big Data!



NAVAL
POSTGRADUATE
SCHOOL

NETWORK SCIENCE CERTIFICATE

“We cannot solve our problems with the same thinking we used when we created them.”

-Albert Einstein

Enhancing Your Career

As the world we live in transitions from the Information Age to the “age of connectedness,” the NPS **Network Science Certificate** arms its graduates with the foundation to understand the underlying complexity of networks—the **building blocks of connectedness**—and enables them to succeed **with greater insight into the world around us.**

A New Science

Networks define the world around us!

This certificate provides an interdisciplinary education using mathematical methods for the analysis, understanding, and exploitation of complex networks, which include technological, biological, and social networks. Having a robust understanding of underlying mathematics is essential for accurate network modeling and data analysis needed to make predictions or influence and manage networks across sectors of industry and government. This innovative program provides students an opportunity to understand and apply a new science that will define the next generation.

