

**All-Hazards Communications Technician
(COMT)**

**Course Pre-Work
Study Guide**

Introduction

This Study Guide was created so that all students of the All-Hazards Communications Technician (COMT) course will have the same foundational knowledge. Some students' skills and experience will be above and beyond what is contained in these pages. Others will be introduced to terms and theories they have not yet experienced. In-class discussion will give students an opportunity to explore further those theories that are new to them. Exercises during the class will then provide an opportunity to test the theories learned. Finally, post-class research and performing as a COMT at incidents and planned events will provide students the opportunity to experiment with and prove the theories in real-world situations.

The Department of Homeland Security Office of Emergency Communications (OEC), through a group of public safety practitioners with many years of incident communications experience, developed this course with the vision that it is an introductory course. Its purpose is to introduce prospective COMTs to the role of the COMT at an incident or planned event, to introduce the technologies that may be deployed in support of an incident, and to provide resources and tools that a prospective COMT can use to better understand what assets are available locally and plan how those resources might be brought to bear in times of crisis.

This Study Guide leads the student to information found in three sources, two of which are available for download from the Websites noted below:

1. The Federal Emergency Management Agency (FEMA) *National Urban Search and Rescue Response System Communications Specialist Course Student Workbook*.¹ **(Note: A hosting site for this publication has yet to be determined.)**
2. The U.S. Department of Justice Office of Community Oriented Policing Services (COPS Office) *Law Enforcement Tech Guide for Communications Interoperability: A Guide for Interagency Communications Projects*.²

Available at: <http://www.search.org/programs/safety/techguides/>

3. The National Law Enforcement and Corrections Technology Center–Rocky Mountain Region (NLECTC) *Understanding Wireless Communications in Public*

¹ Federal Emergency Management Agency (FEMA), *National Urban Search and Rescue Response System Communications Specialist Course Student Workbook, Volumes 1 and 2*, Washington, D.C.: FEMA, U.S. Department of Homeland Security, June 2007. Hereafter, FEMA Student Workbook.

² Dan M. Hawkins, *Law Enforcement Tech Guide for Communications Interoperability: A Guide for Interagency Communications Projects*, Washington, D.C.: U.S. Department of Justice Office of Community Oriented Policing Services, 2006. This publication is available in hard copy at no cost from the COPS Office. See <http://www.cops.usdoj.gov/RIC/ResourceDetail.aspx?RID=238> for more information. Hereafter, COPS Interoperability Tech Guide.

*Safety: A Guidebook to Technology, Issues, Planning, and Management.*³

Available at:

http://www.safecomprogram.gov/SiteCollectionDocuments/Understanding_Wireless_Communications.pdf

The information you will need to be successful in the All-Hazards COMT course is contained in specific chapters in these documents and is outlined below; however, if you would like to learn more, please feel free to read these documents in their entirety.

During the COMT course, you will be tested on the information provided in these studies.

Guided Study

You have been provided three publications. Each contains information relevant to the All-Hazards COMT course you are about to take. This Study Guide directs you to the chapters and pages containing information most relevant to the course; however, nothing precludes you from reading them all in their entirety if you have a desire to learn more!

Study 1: Radio Wave Propagation

Reference Material: FEMA Student Workbook. Volume 2-28, June 2007.

Read Chapter 1.

Study 2: Voice versus Data

Reference Material: NLECTC Guidebook.

Read Chapter 5.

Study 3: Voice Communications

Reference Material: COPS Interoperability Tech Guide.

Read Chapter 16, pages 245–258.

Study 4: Characteristics of Radio Systems

Reference Material: NLECTC Guidebook.

³ Kathy J. Imel and James W. Hart, P.E., *Understanding Wireless Communications in Public Safety: A Guidebook to Technology, Issues, Planning and Management*, Denver, Colorado: NLECTC–Rocky Mountain, second edition, January 2003. Hereafter, NLECTC Guidebook.

Read Chapter 6, pages 41–49.

Study 5: Antennas

Reference Material: FEMA Student Workbook. Volume 2-28, June 2007.

Read Chapter 3.

Reference Material: NLECTC Guidebook.

Read Chapter 6, pages 50–64.

Study 6: Current Public Safety Systems

Reference Material: NLECTC Guidebook.

Read Chapter 7.

Reference Material: COPS Interoperability Tech Guide.

- Read Chapter 16, pages 259–282.
- Read Chapter 17.