

MICROWAVE 101

Comsearch In-House Training Course



ABOUT THE COURSE

Microwave 101 is designed to provide an introductory level foundation with a mixture of both theory and real world examples. Learn through basic theory, case studies, field demonstrations and course examples.

There are NO COURSE PREREQUISITES.

COURSE DATE / TIME

Thursday, October 19, 2017
9am - 4pm

COURSE LOCATION

Comsearch, 19700 Janelia Farm Boulevard,
Ashburn, VA 20147

OBJECTIVE

By the end of this course, you will understand:

1. Basic elements of a microwave path
2. How propagation affects the design
3. Practical factors that influence good path design
4. Regulatory considerations

SECTION 1: Microwave Components

- Radios
- Transmission Lines
- Antennas

SECTION 2: RF Propagation

- Free space path loss
- Fresnel zones
- K Factor
- LOS path clearance
- Fading

SECTION 3: Path Reliability

- Factors that affect reliability
- What is an outage?
- Fade margin
- Space diversity
- Effects of environmental factors

SECTION 4: Path Design Considerations

- Frequency options
- Licensed timelines
- Components
- EIRP limits
- Quiet zones
- Geo satellite orbit
- Tower registrations

SECTION 5: Path Survey

- Survey planning
- Site survey
- Path profile verification

SECTION 6: Interference Analysis

- Interference impact
- C/I calculation

SECTION 7: Frequency Planning

- High / low plans
- Frequency plan conflicts (Bucking)
- Interference resolution methods
- Prior Coordination Procedure
- Interference protection

SECTION 8: FCC Licensing

- FCC application filing
- Completion of construction
- License management
- Regulatory updates

NOTE: Syllabus is subject to change.



Customer Support Center

From North America Telephone: 800.318.1234

International Telephone: +1.703.726.5500

Fax: +1.703.726.5600

19700 Janelia Farm Blvd.

Ashburn, VA 20147 USA

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