ITU/ITSO Face-to-Face Training on

SATELLITE COMMUNICATIONS

Maputo, Mozambique
24-28 JUNE 2019

COURSE OUTLINE

Course Title	ITU/ITSO face-to-face training on Satellite Communications
Course Description	The training aims to provide an in-depth understanding of VSAT systems and protocols in satellite communications. In particular, it will introduce VSAT concepts, satellite communications systems, technologies and protocols. It will also allow participants to assess VSAT systems for deployments into cooperate wide area network solutions.
Course Date	24-28 June 2019
Course Duration	5 days
Registration Deadline	14 June 2019
Training fees	Free
Course Code	19WS24370AFR-E

LEARNING OUTCOMES

Gain an understanding of:

- Basics of satellite communications
- Policy and regulatory guidelines for satellite services
- Network planning and link budget analysis
- VSAT installation and maintenance
- VSAT Equipment and bandwidth procurement
- Radio regulations.

TARGET POPULATION

This training is addressed to regulators and operators in the telecommunication sector. It covers a wide range of issues relating to satellite communications and regulatory issues, including the role of regional and international satellite communications organizations.

COURSE TUTOR/INSTRUCTORS

The course will be tutored by:

- Mr Edward Musisi, ITSO
- Mr Omar Ka, ITU

EVALUATION

The assessment of the participants shall be based on the time spent on the training and the following parameters:

Evaluation Parameter	**Weightage**
Exam	60%
Attendance	10%
Participation (group work, quizzes)	30%
Total	**100%**

Important: *A passing mark of 60% is required for obtaining a completion certificate.*

METHODOLOGY

The face-to-face training will include:

- Instructor-led presentations
- Case Studies
- Group Exercises
- Assignments and Quizzes
- Examination

COURSE COORDINATION

ARECOM contact:	**ITU contact:**
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TRAINING SCHEDULE AND CONTENTS

	Day 1 – 24 June 2019	Day 2 – 25 June 2019	Day 3 – 26 June 2019	Day 4 – 27 June 2019	Day 5 – 28 June 2019
09.00-11.00	**Registration (09.00-09.30)** **Opening Session (09.30-10.00)** **Basics of Satellite Communications:** • Birth of Satellite • Communication Links • Satellite Orbits • Orbital Positions and Radio Interference • Satellite Lifecycle Management	**Fundamentals of Satellite Communications:** • Introduction to Satellite Communications • Satellite Network Design • Technology Trends • Satellite Earth Station Components	**Radio Regulations Cont'd:** • Exercise on SpaceCom • Coordination procedures Non-planned space services • Notification of Notices-Examination of notices and Recording of of frequency assignments	**Link Budget Analysis:** • Components of a satellite circuit • Digital Communications Chain • Modulation • Chanel Coding • Efficiency • Link Budget Analysis Tools	**VSAT Equipment and Bandwidth Procurement** • Defining needs • Procuring the VSAT system
11.00-11.30	**Health Break**	**Health Break**	**Health Break**	**Health Break**	**Health Break**
11.30-13.30	**Basics of Satellite Communications (Cont'd):** • The Space Segment • The Ground Segment • Services • Digital Video Broadcasting, • Digital Satellite News Gathering • Broadband Internet • Multicast Internet Services	**Radio Regulations Cont'd** • Receivability of Space Notices and e-submission (Resolution 908) • BRIFIC (Space Services) and Preface • Submission of Comments using Space Com • Introduction to BR Space Software and Databases • Installation of BR Software* • Space Services Website	**Radio Regulations Cont'd:** • Capturing of Earth Station for coordination • Creation of Earth Station coordination contours	**Exercise on Link Budget Analysis** **VSAT Installation and Maintenance**	**Policy and Regulatory Guidelines for Satellite Services** • Legal Framework • Key regulatory and licensing trends • Market Entry
13.30-14.30	**Lunch Break**	**Lunch Break**	**Lunch Break**	**Lunch Break**	**Lunch Break**
14.30-16.30	**Radio Regulations and** • ITU and ITU-R Overview • Orbital Spectrum –International Regulatory Framework • Small Satellite Regulations • Space FSS and BSS Plans • Cost Recovery for satellite filings • Harmful Interference (SIRRS)	**Network Planning Fundamentals:** • Digital Communication Techniques • Modulation • Satellite Economics • Satellite Network Topologies	**Excursion to Satellite Earth Station**	**WRC-19 Preparations** • ITU-R Study Groups • WRC-19 Agenda items related to Space Services**Satellite Broadband:** • **Regulatory Issues** • **Principles** • **Implementation**	**General Test** **Q&A** **Closing Activities**

PARTICIPATION FEES

This course is being offered **free** of charge to participants.

REGISTRATION

ITU Academy portal account

Registration should be made online at the ITU Academy portal.

To be able to register for the course you **MUST** first create an account in the ITU Academy portal at the following address: https://academy.itu.int/index.php/user/register.

Course registration

When you have an existing account or created a new account, you can register for the course online at the following link: https://academy.itu.int/index.php/training-courses/full-catalogue/ituitso-training-satellite-communications-english-speaking-countries-africa

Please select "Apply here" and your application will be submitted. It will then be reviewed and either accepted or rejected. ***Please note that seats for this training are limited to 40.***

You can also register by finding your desired course in our training catalogue https://academy.itu.int/index.php/training-courses/full-catalogue.