Diploma in Telecommunications Management Studies

15 August – 23 September 2016
Johannesburg, South Africa

Overview

The fast moving telecommunications industry driven mainly by rapidly changing technologies, evolving services and increasingly complex consumer demands, generate new business challenges, requiring the professionals in the industry to be constantly updated. This six-week course is designed to provide participants with tools that will enhance their ability to master the changes in the business and technical environment to assure operational and business success for their organisations. This course will examine essential elements of technology evolution, the changing institutional/legal/regulatory frameworks and the challenges of creating value through enterprise and effective management practices. Essential management theories and frameworks will be adopted to suit the ICT sector. The course utilises a practical, hands-on approach and is designed to be challenging and thorough.

For more information: about this course, or to register, contact us on:
Tel: +44 (0) 208 600 3818
email: h.muchando@cto.int
Objectives
This course will provide participants with a broad and holistic view of the industry and equip them with the ability to adopt end-to-end approaches in tackling the key issues that drive value creation and performance in this highly competitive market place.

Target Audience
Telecommunications professionals of operational companies, both fixed and mobile, and regulatory agencies working in various departments such as planning, strategy, technical, regulatory, legal, marketing, sales and business development.

Expected Outcomes
This course will provide participants with an in-depth knowledge of the essential principles, theories and frameworks that underpin technology deployment, regulation /competition and the challenge of value creation through enterprise and applied management. A blended learning approach involving lectures, case studies and hands-on application of key concepts has been adopted for the course to enhance the learning experience and outcomes.

Course Outline

Weeks 1 – 2

Module 1: Telecoms Fundamentals (3 days)
- Overview of telecom networks
- Switching and signalling basics
- Transmission basics (OFC and OFS) and networks (PDH and SDH)
- Data communications
- IP routing, VoIP and MPLS
- Fixed and wireless access technologies
- Broadband fundamentals, including DSL technologies
- NGN, IMS, and soft switch architecture
- Radio cells principles
- GSM and CDMA network architectures
- Call and mobility management
- GPRS, EDGE, 3G & WCDMA, 4G/LTE...
- WiBRO-WiFi, WiMAX, and future mobile trends
- Convergence of wired and wireless technologies
- The future market place (4G and beyond)

Module 2: Planning and Designing of Fixed and Wireless Networks (3 days)
- Key components of fixed and mobile networks
- Strategic planning and network design
- Fixed network optimisation
- Planning of telecom nodes and transmission centres
- Spectrum planning and optimisation
- Spectrum management and pricing
- Call management and mobility management
- Quality of Service monitoring
- Power control in mobile communications
- Mobile networks and standards: GSM and CDMA
- Mobile data networks: GPRS, EDGE, EV-DO and HSDPA
- Mobile network deployment and expansion
- Value Added Service Providers (VAS) and Mobile Virtual Network Operators (MVNOs)
- Wi-Fi, WiMAX, 4G, LTE, and future trends in mobile communications
- Global telecom standards

Module 3: Data Networks (1 day)
- Concept of data communication
- Packet switching
- Message switching
- Transport technologies: ATM, Frame Relay, and X.25
- Access technologies: ISDN and xDSL
- IP networks
- VoIP
- Triple and quad-play networks
- Convergence beyond triple and quad-play

Module 4: Next Generation Networks and Services (1 day)
- Next Generation Networks (NGN)
- NGN principles
- NGN architecture
- Fibre optic cables & systems
- Latest trend in access technologies (FTTH, GPON and EPON)
- Migration of legacy systems to NGN
- Emerging Technologies
- NGN Services
- Basic telecom services - voice and data
- VAS including voice management options
- IP services such as VoIP, Rich Voice including protocols such as H.323 and SIP
- Multimedia services including triple play, quad play and IPTV
- Cloud Services, IaaS, PaaS, SaaS and others
## Module 4:
Next Generation Networks and Services (1 day) (Continued)
- QoS and its impact on bandwidth provisioning
- Service security policies and management
- Service evolution including Apps, Content Services and OTT

## Module 5:
Network Interconnect (2 days)
- The need to interconnect, types of interconnects and co-location
- Categories of network interconnect in fixed, wireline and wireless networks
- Essential facilities as specified by global standards
- Interconnect agreements and tariffs
- Security in access to structures/co-location of dominant service providers
- Revenue allocation, measured and non-measured traffic interchange
- Forecasting future requirements for capital planning
- Network interconnect/co-location as a business opportunity

## Module 6:
Understanding Strategy (1 day)
- A generic approach (Michael Porter)
- A problem based approach (Richard Rumelt)
- Strategic choices informed by vision, mission and objectives (Ansoff, BCG GE-Mckinsey and TOWS Matrix)
- Strategic implementation and valuation

## Module 7:
Change Management (1 day)
- Types of change (planed, driven and evolved)
- Change Management Strategies
- Top-down transformation and bottom-up change
- Stages of change
- Forces for change
- Sources of resistance
- Managing the politics of change

## Module 9:
Risk Management (1 day)
- Understanding risks within and outside the business
- Emerging threats
- Performing a business impact analysis
- Risk assessment and monitoring
- Developing risk management strategies
- Risks in IT and data

## Module 10:
Business Continuity Planning (1 day)
- Identification and assessment of key business risk areas
- Corporate risk matrices and profiles
- Development of risk management frameworks
- Disaster management, including action plans
- Business continuity planning: strategy, organisation and procedures

## Week 3
### Module 11:
Strategic Human Resource Management (2 days)
- Human resource management basics
- Effective communication
- Time management
- Decision making
- Personnel Management
- Job Analysis & Design
- Performance measurement, rewards and feedback
- Recruitment
- Training
- Strategic talent management
- Succession planning
- Stress management
- Conflict management
- Motivation
- Team building
- Leadership and team management
- Managing cross teams
- Emotional intelligence
- HR information management
- Managing diversity strategies
- Succession planning

## Module 12:
Business Intelligence, Marketing and Sales (2 days)
- The telecommunications business environment
- Competitive intelligence
- Business intelligence, marketing research and customer segmentation
- Decision making
- Marketing management basics and process
- Applying global marketing principles to regulation
- Marketing strategies including effective e-marketing tactics
<table>
<thead>
<tr>
<th>Module 12: Business Intelligence, Marketing and Sales (2 days)</th>
<th>Module 14: ICT Policy and Regulation (Continued)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Portfolio management</td>
<td>• Universal access</td>
</tr>
<tr>
<td>• Marketing of services</td>
<td>• Environmental issues</td>
</tr>
<tr>
<td>• Service positioning, differentiation and consumer buying behaviour (the strategy clock and other models)</td>
<td>• Data and privacy protection</td>
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<tr>
<td>• Brand management</td>
<td>• e- and m-applications such as e-governance and m-governance</td>
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<tr>
<td>• Churn management</td>
<td>• Dispute resolution</td>
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<tr>
<td>• Sales strategy and management</td>
<td>• Service positioning, differentiation and consumer buying behaviour (the strategy clock and other models)</td>
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<tr>
<td>• Sales channels and management</td>
<td>• Brand management</td>
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<tr>
<td>• Supply chain management</td>
<td>• Churn management</td>
</tr>
<tr>
<td>• Targeting global markets</td>
<td>• Sales strategy and management</td>
</tr>
<tr>
<td>• Enterprise marketing management</td>
<td>• Sales channels and management</td>
</tr>
<tr>
<td>• Risk management and measurement</td>
<td>• Supply chain management</td>
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<thead>
<tr>
<th>Module 13: Strategic Customer Relationship Management (1 day)</th>
<th>Module 15: Technology and Financial Management (2 days)</th>
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</thead>
<tbody>
<tr>
<td>• Changing from a technology-centric to a customer-centric approach</td>
<td>• Economic Environment of Business</td>
</tr>
<tr>
<td>• Understanding customer needs and behaviour</td>
<td>• Accounting Principles</td>
</tr>
<tr>
<td>• Attitude Improvement for CRM</td>
<td>• Financial Management</td>
</tr>
<tr>
<td>• CRM Basics and its components</td>
<td>• Preparation and analysis of General Financial Statements and Ratio Analysis</td>
</tr>
<tr>
<td>• CRM strategy</td>
<td>• Capital structure</td>
</tr>
<tr>
<td>• Business process management</td>
<td>• CAPEX vs. OPEX</td>
</tr>
<tr>
<td>• CRM measurement</td>
<td>• Working capital management</td>
</tr>
<tr>
<td>• Customer care</td>
<td>• Telecommunications asset management</td>
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<tr>
<td>• CRM in a convergent scenario</td>
<td>• Costing and MIS as a tool for accounting</td>
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**Week 5**

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<thead>
<tr>
<th>Module 14: ICT Policy and Regulation (3 days)</th>
<th>Module 16: Telecom Fraud Detection and Management (2 days)</th>
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<tbody>
<tr>
<td>• Telecom policy</td>
<td>• Description of fraud, evolution of fraud and fraud drivers</td>
</tr>
<tr>
<td>• National ICT policy</td>
<td>• SIM card fraud, Man-in-the Middle and subscription fraud</td>
</tr>
<tr>
<td>• Policy from a stakeholder’s perspective</td>
<td>• Fraud risk identification, identifying weaknesses, grading risks and counter measures</td>
</tr>
<tr>
<td>• Policy objectives and implementation</td>
<td>• Vulnerability assessment</td>
</tr>
<tr>
<td>• Global standards and compliance</td>
<td>• Fraud techniques</td>
</tr>
<tr>
<td>• Regulatory functions and models</td>
<td>• Fraud targets</td>
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<tr>
<td>• Regulatory governance and independence</td>
<td>• Fraud channels</td>
</tr>
<tr>
<td>• Service and content regulation</td>
<td>• Fraud mitigation</td>
</tr>
<tr>
<td>• Technology regulation and net-neutrality</td>
<td>• External vs. internal fraud</td>
</tr>
<tr>
<td>• Economic regulation and competition</td>
<td>• Detection and Prevention</td>
</tr>
<tr>
<td>• Market definition, market analysis and forward planning</td>
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<tr>
<td>• Dominance and anti-competitive behaviour (cross-subsidisation, price discrimination and predatory pricing)</td>
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<tr>
<td>• Price regulation (price cap regulation and rate of return regulation)</td>
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<tr>
<td>• Unbundling and access to essential facility</td>
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<tr>
<td>• The LRIC process and access pricing including interconnection and unbundled access</td>
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<tr>
<td>• Mergers and acquisitions</td>
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<td>• Customer care under convergence</td>
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<tr>
<td>• Licensing and market entry</td>
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<td>• Spectrum management and development of new services</td>
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**Week 6**

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<tr>
<th>Module 15: Technology and Financial Management (2 days)</th>
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<td>• Costing and MIS as a tool for accounting</td>
<td>• External vs. internal fraud</td>
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<tr>
<td>• Preparing business plans</td>
<td>• Detection and Prevention</td>
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<tr>
<td>• Cost of migration to new technologies</td>
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<td>• Costs and tariffs</td>
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<th>Module 17: Cyber issues (1 day)</th>
<th>Module 18: Business Communications (1 day)</th>
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<tr>
<td>• Cybersecurity</td>
<td>• Principles of business and workplace etiquette</td>
</tr>
<tr>
<td>• Critical Information Infrastructure Protection</td>
<td>• Business communication</td>
</tr>
<tr>
<td>• Cyber crime and cyber threats</td>
<td>• Challenges in a competitive scenario</td>
</tr>
<tr>
<td>• Privacy and data protection</td>
<td>• Business writing skills</td>
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<tr>
<td>• Protection of children on line</td>
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</tbody>
</table>
Module 19: Writing a Business Case
(1 day)

- Product, service or problem description
- Market research (customers and competitors)
- Operation planning
- Business controls
- Financial analysis
- Developing and presenting a business plan with confidence

Who we are

The CTO is the oldest and largest Commonwealth organisation engaged in multilateral collaboration in the field of ICTs. Using in-house and partner experience, it supports members in integrating ICTs to deliver effective development interventions that emancipate, enrich, equalise and empower people within the Commonwealth and beyond.

What we do

The work of the CTO goes back to the Organisation's creation in 1901 as the Pacific Cable Board. Since then, the CTO has been at the centre of continuous and extensive international communications development funding, cooperation and assistance programmes. Since 1985, the Organisation has delivered to its members in Europe, the Caribbean, the Americas, Africa and Asia-Pacific over 3,760 bilateral and multilateral telecommunications and ICT capacity building projects in the form of policy, operational and regulatory training, and expert assistance. Moreover, the CTO has been at the forefront of generating cutting-edge knowledge through its research and consultancy services, as well as sharing ideas through its conferences and workshops held around the world. This long history as a development facilitator provides the Organisation with a unique and growing delivery capacity for ICT4D programmes and services.

Supporting ICT4D in the Commonwealth

The CTO seeks to work collaboratively with other Commonwealth bodies to build mutually beneficial synergies in the interests of its members. The CTO has a key role to play in leading ICT4D initiatives across the Commonwealth, and it is committed to working together with other Commonwealth entities to reduce overlap and replication of activities. The CTO welcomes the opportunity to offer secretariat support to any Commonwealth ICT initiatives that reflect the needs and interests of its members.

<table>
<thead>
<tr>
<th>Event</th>
<th>Date/ Location</th>
<th>Event type</th>
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<tbody>
<tr>
<td>Regulatory Boards Workshop</td>
<td>11 - 15 April 2016, London</td>
<td>Workshop</td>
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<tr>
<td>Digital Broadcasting Africa Forum 2016</td>
<td>11 - 13 May 2016, Abuja</td>
<td>Conference</td>
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<tr>
<td>Commonwealth Spectrum Auction Workshop</td>
<td>June 2016, Namibia</td>
<td>Workshop</td>
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<tr>
<td>Broadband Caribbean Forum 2016</td>
<td>14 - 15 July 2016, Port of Spain</td>
<td>Conference</td>
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<tr>
<td>Regulatory Boards Workshop</td>
<td>18 - 22 July 2016, London</td>
<td>Workshop</td>
</tr>
<tr>
<td>Commonwealth Telecommunications Organisation Forum 2016</td>
<td>12 - 16 September 2016, Nadi</td>
<td>Conference</td>
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<tr>
<td>Broadband Asia Forum 2016</td>
<td>October/November 2016</td>
<td>Conference</td>
</tr>
<tr>
<td>Commonwealth Human Resources and ICTs Forum 2016</td>
<td>21- 22 November 2016, Kingston</td>
<td>Conference</td>
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<tr>
<td>Spectrum Management Conference</td>
<td>November 2016</td>
<td>Conference</td>
</tr>
<tr>
<td>Broadband Pricing</td>
<td>23 - 28 May 2016, Yaounde, Cameroon</td>
<td>Workshop</td>
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<tr>
<td>SS7 Signalling and Applications in Mobile</td>
<td>23 - 28 May 2016, Gaborone, Botswana</td>
<td>Workshop</td>
</tr>
<tr>
<td>Business Scenario for 3G Mobile Networks</td>
<td>06 - 11 June 2016, Yaounde, Cameroon</td>
<td>Workshop</td>
</tr>
<tr>
<td>Telecommunications Business Process Re-engineering</td>
<td>06 - 11 June 2016, Accra, Ghana</td>
<td>Workshop</td>
</tr>
<tr>
<td>Regulating ICTs Workshop</td>
<td>04 - 09 July 2016, London, United Kingdom</td>
<td>Workshop</td>
</tr>
<tr>
<td>Overview: ICT Policy and Regulation</td>
<td>04 - 09 July 2016, Johannesburg, South Africa</td>
<td>Workshop</td>
</tr>
<tr>
<td>Talent Management, Knowledge Management and Change in a Dynamic Environment</td>
<td>11 July - 16 2016, Mbabane, Swaziland</td>
<td>Workshop</td>
</tr>
<tr>
<td>Marketing of Telecommunication Services</td>
<td>18 - 23 July 2016, Trinidad and Tobago</td>
<td>Workshop</td>
</tr>
</tbody>
</table>
Registration Form

Personal Details

Mr/Mrs/Ms/Other __________ First Name __________ Last Name __________

Job Title __________

Organisation __________

Address __________

City __________ Postcode __________ Country __________

Tel. __________ Mobile __________ Fax __________

E-mail __________

Authorising Line Manager’s Name __________

Authorising Line Manager’s E-mail __________

Payment Options

1. Select Delegate Rate (please refer to the list of CTO members/PDT Partners provided overleaf)

<table>
<thead>
<tr>
<th></th>
<th>Standard Rate</th>
<th>Early Registration by 01 July 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTO Members</td>
<td>£2,600</td>
<td>£2,500</td>
</tr>
<tr>
<td>Others</td>
<td>£3,000</td>
<td>£2,900</td>
</tr>
</tbody>
</table>

2. Payment Mode (choose from either Invoice, Bank Transfer, Cheque, or Credit Card)

- Invoice: Invoice me at the above address (Discounts do not apply, payment must be received by us prior to the abc event’s start date)
- Bank Transfer: To: Coutts & Co., 440 Strand, London WC2R 0DS, UK
  Account Number: 43675071
  Sort Code: 18-00-02
  Swift Code: COU7 GB22
- Cheque: Cheque enclosed, payable to “CTO HQ”
- Credit Card: Visa / Mastercard (circle as appropriate)

Card Holder’s Name __________

Card Holder’s Billing Address (if different from above) __________

Card Number __________ Expiry Date __________ 3-digit security code on back of card __________

Signature __________ Date __________

Additional Information

To help us improve our services to you and your organisation, please tell us more about you and your organisation.

Your role in the organisation

- Strategic/executive
- Planning
- Control
- Operations

Your organisation type

- Government
- Regulator
- Operator
- Manufacturer
- Other

Your area of work in the organisation

- Business development
- Corporate affairs
- Customer service and care
- Engineering and technical management
- Financial, purchasing and investor relations
- IT/AM management

Your organisation’s service areas

- Fixed network/services
- Mobile/wireless network/services
- Satellite network/services
- Internet

Marketing and sales

- Public relations and corporate communications
- Regulatory and legal affairs
- Telecommunications network management
- Human resources
- Other

Data Protection / Privacy

The CTO does not sell, rent or lease its customer information to third parties. We may, from time to time, contact you on behalf of a third party/partner about a particular offering that may be of interest to you. In those cases, your unique personally identifiable information is e-mailed, name, address, telephone number is not transferred to the third party/partner. In addition, we may share your information with trusted partners to help us perform statistical analyses, send you e-mail or postal mail, provide customer support, or arrange for deliveries or other such services. All such third parties are prohibited from using your personal information except to provide these services to the CTO and they are required to maintain the confidentiality of your information.

3 SIMPLE WAYS TO REGISTER!

Fill in and fax this form back at +44 20 8600 3819

Call the programme team at +44 20 8600 3800

E-mail the programme team at programmes@cto.int, quoting the course “Event ID” above.

NEED HELP?

Call us now on +44 20 8600 3800 or e-mail the Programmes team at programmes@cto.int

Summary Terms and Conditions

The CTO will endeavour, as can be reasonably expected, to ensure that the course is delivered to meet delegates’ expectations. Registration is subject to availability and payment received by the deadline where specified, or else before the course start date, whichever applies. Dates may be subject to changes. Travel, accommodation, daily transportation to venue, subsistence and other costs are the sole responsibility of the delegate and are not included in the above fees. Applicants are responsible for their visa arrangements and other formalities wherever required. Course bookings may be cancelled at the discretion of the CTO or its partners. Applicants paying by bank transfer are responsible for bank charges and any other such costs and should ensure the exact amount in GBP Sterling is credited in the CTO bank account. Applicants requiring additional information prior to their booking should ensure they provide sufficient time before the booking deadline. Cancellation rules apply, as summarised below. For a full version of our Ethical Framework or our Terms and Conditions, please visit our website at www.cto.int

Cancellations / Refunds

For delegate cancellations/withdrawals, the following refund rules apply:

- 31 days or more prior to event: the full amount less a handling charge of 10% or a minimum of £55, whichever applies
- 30 days or less prior to event: no refund

Refunds will be made by bank transfer only.

For delegate cancellations/withdrawals, delegates are entitled to a 100% refund within 60 days of the withdrawal/cancellation. Refunds will be made by bank transfer only.

www.cto.int

Fax it back to +44 20 8600 3819, or return to the CTO at programmes@cto.int.