

MSc Telecommunications with Business Programme 2018/19

Module Name: Customer Service, Operations & Planning
(ELEC0046)

Module Acronym: B3

Module Manager: Prof. Andy Valdar

Module Summary:

This module addresses the key to customer satisfaction, namely the effective day-to-day management of sales, operations and services. The objective of the module is to apply theory to the practices encountered in the real life of a telecommunication and ICT service provider. In addition, the module presents the best practice in operations and customer service. Specific areas covered include understanding and managing customer experience, sales, service science, service-and-network management systems, field operations and network planning, and cyber security within telecommunications networks. These aspects are extended by introducing some of the issues involved in managing a global telecommunications business. The module also presents an introduction to evaluating and managing business risk in a service industry, as well as describing the range of project management tools and techniques.

Learning Outcomes:

At the end of the module, students should be able to:

- Understand the principles of customer service management, with particular reference to the telecommunications business. Students will be able to assess the needs of different customer segments and the approaches that a service organisation needs to make in addressing the range of customers.

- Understand the application of service-science analysis to the development and management of services by any service company. In addition, students will be able to analyse their own ideas for new telecommunications or ICT services using the systematic approach of service science in order and present their plans in a suitable business case format.
- Understand the principles of risk management in terms of identifying, analysing, and assessing risks in today's businesses. In particular, students will be able to present the risks and their mitigation in a business case for new service launch.
- Understand the range of roles of support systems in a service industry in general and the telecommunications industry in particular. Students will be able to identify the trade-offs of data storage, system functionality, accessibility, cost, and cost in a Telco's support system platform.
- Understand the principles of managing customer operations in order to best meet customer service commitments within the cost constraints.
- Understand the range of planning roles and how these are applied to network planning and dimensioning in a Telco. In particular, students will be able to describe how the various planning stages involved in building the capital expenditure budget for a Telco. interact with the various stages of business and finance planning within the organisation.
- Understand the range of project management tools and techniques currently in use and apply them to managing today's telecommunications and ICT projects.
- Understand the role of sales for any company, as well as the special challenges facing today's Telco's.

Module Content:

1) Managing Customer Experience

The principles involved in understanding customers' expectations and the retention of customers by effective relationship management is explored. This includes understanding customer experience today both off-line and on-line. The concept of customer relationship management (CRM) is introduced and successful exploitation of CRM systems is considered. A framework for the

customer management strategy is developed and applied to the 21st Century customer. The importance of effective communication with the customer is investigated, with particular reference to modern media practice and the important role of social networks.

2) Service Science

The newly-created subject of service science, which covers the systematic approach to developing, launching and delivering services, is extensively explored through the use of case studies and recent academic research. Specific areas covered include the science of systems thinking, the analysis of business processes, the range of process architectures and operational models. Students will be encouraged to explore a number of case studies and to apply the principles of service science management to contemporary examples in the telecommunications business.

3) Risk Management

This set of lectures addresses the identification and management of risk in today's businesses and service environment. Specifically, students will investigate what constitutes risk and how this differs from hazardous situations. The whole question of tolerability of risk is then explored, using case studies as well as contemporary examples. Students will address the difficult area of how risk and cost need to be traded and how this is managed. The techniques for analysing risk and the required levels of mitigation are then explained. Finally, students will learn to apply risk identification and assessment to the development of business cases for telecommunications services.

4) Management of Operations

This lecture explores the way that a service provider organises the management of field operations providing customer service. The topic covers both the cost and quality trade-offs as well as the analysis of how to maximise the efficiency of the technician work-force in the field. The principles of operational support systems are also introduced, covering the required

functionality for a telecommunications network service provider and their interconnection with other systems within the Telco's organisation. Students will also learn of the practical situations and how these are managed by today's service providers through consideration of real-life examples.

5) Planning

All aspects of the planning role within a telecommunications business are covered by this lecture. In particular, the roles of strategic, long-term, medium-term and short-term planning and forecasting are described. Students will learn how the planning of the deployment of network capacity, equipment, and systems is linked into the business-planning process of the Telco. In particular, students will learn how the capital expenditure (Capex) budget is built.

6) Project Management

This set of lectures covers the range of project management tools and techniques currently in use across businesses. Through the use of case studies and practical examples students are introduced to the concepts of measuring success, managing relations with the various stakeholders, scheduling and programme monitoring techniques. Finally, the use of earned value as a way of managing large projects is presented. Although the techniques considered are generic, the students will be able to apply them specifically to the contemporary telecommunications situations.

7) Sales

The importance of sales for any company and its relationship to marketing and customer service is described. The particular challenges facing today's Telco's are then outlined. Students are given a detailed run through of how to prepare for a sales meeting with a major customer, as well as how to react to the inevitable setbacks involved in such interactions.

8) Cyber Security

The range of cyber threats to today's telecommunications network operators are

described. Many of the threats are generic resulting from the widespread adoption of IP networks and the vast array of applications and terminals used. The lectures considers the particular additional threats that affect Telco's networks. Finally, the ways to minimise the threat of such attacks are considered, together with examples of techniques for dealing with them.

Assessment:

At the end of the module students will be set an examined assignment designed to assess their understanding of how services should be developed and managed to meet customer needs and expectations in today's market place.

Tutorials/Workshops:

Two hour tutorial to address the main learning points of the module and to prepare the students for their assignment

Guest Speakers:

Several guest speakers from the industry will be invited to give the students the benefit of their experience on the practical aspects of the telecommunications business covering: customer service, planning and operations for a Telco., cyber security, and the sales process.

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