

# Birmingham City University Technology Innovation Centre

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## *Postgraduate Programme*

### Programme Specification including Student Guide and Employer Guide

#### MSc Supply Chain Management

Date of Course Approval/Review	Current Version Number	Version Date
8 March 2006	2.05	19 Sept 2008



## Definitive Documents and Version Control

This document has a version number and reference date in the footer. The process leading to introduction of new courses, and major changes to courses follows tic procedure QA 1 and culminates in approval by the University's Senate.

The process leading to introduction of minor changes to modules and courses follows tic procedure QA 5 and culminates in approval by the Dean.

The reference date will be that of the approval event, minor changes board, or other meeting at which formal consideration was given.

Further details about the course and document development may be obtained from minutes of the approval meeting, or minor changes board. A history of the document is summarised in the table below and further information relating to past versions can be obtained from the tic Registry.

<b>MSc Supply Chain Management Programme Specification, Student and Employer Guides</b>			
<b>Version</b>	<b>Event</b>	<b>Date of event</b>	<b>Authorised by</b>
2.01	Review and Re-Approval	8 March 2006	Dean of Faculty
2.02	Review and Re-Approval (conditions)	8 March 2006	Panel Chair
2.03	Minor changes Board of Studies	13 June 2007	Dean of Faculty
2.04	Minor changes Board of Studies	15 May 2008	Dean of Faculty
2.05	Updated with details of flexible delivery	19 Sept 2008	Programme Manager

**NOTE:** This specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes advantage of the learning opportunities that are provided. More detail on the specific learning outcomes, indicative content and the teaching, learning and assessment methods of each module can be found (1) at <https://web.tic.ac.uk>, (2) in the Course Book, and (3) in the Postgraduate Scheme Book. The accuracy of the information contained in this document is reviewed by the University and may be checked within independent review processes undertaken by the Quality Assurance Agency.

The information from this specification may be selectively extracted and included in documents that are more appropriate for students, intending students and employers.

<b>1</b>	<b>Awarding Institution / Body</b>	<b>Birmingham City University</b>
<b>2</b>	<b>Teaching Institution:</b>	<b>Technology Innovation Centre</b>
<b>3</b>	<b>Programme accredited by:</b>	<b>N/A</b>
<b>4</b>	<b>Final Award:</b>	<b>MSc</b>
<b>5</b>	<b>Programme Title:</b>	<b>Supply Chain Management</b>
<b>6</b>	<b>UCAS Code:</b>	<b>N/A</b>
<b>7</b>	<b>QAA Benchmarking Group:</b>	<b>N/A</b>

## **8 Aims of the programme**

The course aims to provide learners with:

- 1 a course of study that will extend them intellectually and practically according to their abilities.
- 2 a specialist course of study that identifies why the integration of all the activities in the organisation are necessary to achieve good Supply Chain Management practice.
- 3 an opportunity to demonstrate their understanding of how functional activities operate within an organisation and how the structure of industrial systems may be used to meet the varying demands placed on companies.
- 4 a course which will develop skills of analysis, synthesis, decision making and the ability to cope with unfamiliar problems.
- 5 an opportunity to relate to industry and commerce and apply new technologies and techniques to solve present and future problems concerning not only UK but also international companies.
- 6 an opportunity to observe how industry operates within a framework of regulations and policies and the importance of human resources and to welcome and initiate system changes in companies to achieve growth.
- 7 a wide range of transferable and marketable skills and knowledge leading to employment opportunities in a variety of roles within a range of industry sectors.
- 8 teaching and learning techniques which place emphasis on active and participative education;
- 9 an opportunity to acquire skills necessary for lifelong learning;

**9 Intended learning outcomes and the means by which they are achieved and demonstrated: the programme provides learners with opportunities to develop and demonstrate knowledge and understanding, skills and other attributes as follows:**

**Knowledge and understanding**

<b>Knowledge and understanding of:</b>	<b>Teaching, learning and assessment methods used:</b>
<ol style="list-style-type: none"> <li>1. The activities in an organisation and why their integration is necessary for good Supply Chain Management.</li> <li>2. The various tools and techniques used in current best practice and their interrelationship.</li> <li>3. How current logistical techniques in material flow, cost control and information technology enables the effective integration of supply chains.</li> <li>4. The structure of industrial systems and how these systems may be used to meet the varying demands placed on companies.</li> <li>5. Why the integration of functional activities in the organisation is necessary to maximise its effectiveness and achieve best practice.</li> <li>6. Current practices and alternative strategies to meet the operational and strategic requirements for an effective Materials Management and Distribution system.</li> <li>7. The strategic issues affecting the effective operation of any Materials Management and Distribution system.</li>   <li>8. Replenishment strategies adopted within a given situation and analyse its effectiveness.</li> </ol>	<p>This course is available with traditional Full and Part-Time delivery as well as a Flexible Delivery option.</p> <p>Knowledge is assessed, formatively and summatively, by a number of methods, including seminars, coursework, presentations, and practical project work.</p> <p>A range of assessment methods are employed, the criteria for each module being published within each specified module guide.</p> <p><b>Flexible Delivery</b></p> <p>The flexible learning approach combines face-to-face traditional lecture, seminar, tutorial, self-directed study and peer review sessions combined with on-line material.</p> <p>Directed independent learning activities are encouraged at all stages of the course.</p> <p>Knowledge and understanding are acquired through rich media web based curricula and use of collaborative technologies where appropriate.</p> <p>Knowledge and competence assessment is undertaken by tutors and peers, this both formative and summative. This includes</p>

<ol style="list-style-type: none"> <li>9. The present Mechanical Handling Equipment used to other alternatives and determine the system efficiencies.</li> <li>10. The most suitable method for Data Capture techniques in a given situation.</li> <li>11. The suitability of various modelling and simulation techniques as a part of the Materials Management design, development and implementation phases for a given project.</li> <li>12. The effect on the Materials Handling systems and Materials Management techniques for different manufacturing strategies.</li> <li>13. Modern Warehousing principles and practices particularly with respect to automation issues.</li> <li>14. The operating features of Material Handling devices and determine their significance for a variety of applications.</li> <li>15. How the effective introduction of data gathering and analysis techniques can improve the efficient operation of a Material Handling system.</li> <li>16. How simulation packages can be used to design Materials Handling and Warehouse Systems.</li> <li>17. The nature of different models and simulation methods and their role in the decision making process within a manufacturing company or commercial organisation.</li> <li>18. The types of models and simulation methods and how they may be used to aid strategic and operational planning.</li> <li>19. The operating requirements of simulation systems and determine their significance for a variety of applications.</li> <li>20. Critically evaluate a series of scenarios with a view to preparing simulation models for in-depth analysis.</li> </ol>	<p>seminars, coursework, practical case studies, theory projects, time constrained examinations, and practical assessments.</p> <p><b>Traditional Delivery</b></p> <p>The traditional delivery includes weekly face-to-face lectures, workshops or seminars.</p> <p>Students are supported beyond the traditional face-to-face delivery by appropriate tools and technologies developed to support collaborative working.</p> <p>Knowledge and understanding are acquired through web based course material, electronic and face-to-face communication, seminars, student-led seminars and other directed independent learning activities at all stages.</p>
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## Skills and other attributes

### Intellectual / cognitive skills:

1. Analysis of customer related issues and the ability to design and implement solutions based on analysis of the whole supply chain.
2. Argue rationally and draw independent conclusions based on a rigorous, analytical and critical approach to data, demonstration and argument.
3. Synthesise theory and practice.
4. Assess and resolve competing ethical issues.
5. Construct a fully researched and referenced technical report, which evaluates a technical/management issue using a word processing package.
6. Demonstrate, in an analysis of a specified problem, a high level of competence and understanding of the data manipulation and information presentation mechanisms of a spreadsheet package.
7. To relate to industry and commerce and apply new technologies and techniques to solve present and future problems concerning not only UK but also international companies.
8. To develop skills of analysis, synthesis, decision making and the ability to cope with unfamiliar problems.
9. Design a strategy for the successful implementation of an improved system based on the initial audit carried out previously.
10. Use a number of planning and control tools in distribution and transportation to analyse and solve a number of practical problems.
11. Critically appraise the use of various software packages for differing applications with a view to benchmarking for system selection.

### Teaching, learning and assessment methods used:

Intellectual skills are developed through teaching and learning programme previously outlined.

Analytical and problem solving skills are further developed using a range of appropriate 'real' and 'theoretical' case studies and problem and task-based learning scenarios.

Many of the modules require a major project report to be produced which demonstrates the students ability to apply the knowledge gained to the solution to real life problems.

Assessment includes practical project work, individual and group presentations, written coursework.

### Skills and other attributes (cont.)

#### Practical, research and independent learning skills:

1. Access information from the Internet and appraise its suitability for research purposes at a Master's level. To demonstrate the ability to work autonomously and accept accountability.
2. Reflect on personal practice and modify it accordingly.
3. Interpret and critically evaluate knowledge, concepts and ideas and/or forms of artistic expression.
4. Comprehend and solve mathematical problems at a level required by the chosen course of study.
5. Demonstrate knowledge and skills outlined within the course modules and apply to the analysis and solution of complex problems or to the expression of sophisticated artistic ideas.
6. Possess a defined body of knowledge, skills and understanding and analyse its relationships with conceptual frameworks and, where appropriate, professional practice.

#### Teaching, learning and assessment methods used:

The acquisition of appropriate and transferable practical skills is central to the learning strategy of the programme. Initiative and independence are fostered throughout, and develop incrementally as the course progresses. Emphasis is placed on guided, self-directed and student-centred learning, with increasing independence of approach, thought and process.

Learners are encouraged to plan their own work schedules and are required to meet strict deadlines. Diaries / logbooks are required to be kept in some modules. Learners undertake a major individual practical / research project and complete a related dissertation.

**Transferable / key skills:**

- elicit the co-operation of others and contribute to team goals
- manage time and prioritise workloads
- make effective oral and written presentations which are coherent and comprehensible to others
- access and make appropriate use of relevant numerical and statistical information
- use a variety of forms of communication and expression and employ them selectively, appropriately and effectively according to the needs of a situation.
- plan and deliver an oral presentation in an eloquent and professional manner, making use of a computer-based presentation aid and to lead discussion and field arguments.
- understand career opportunities and begin to plan a career path.
- show confidence and self-awareness, reflect on own learning, and be self-reliant and constructively self-critical.

**Teaching, learning and assessment methods used:**

Transferable/key skills are core to the learning strategy of the programme. They are pervasive, and are incorporated into modules and assessments as appropriate, for example, team-working skills are fostered through the use of group, task-based practical projects. Keeping logbooks and submitting self-assessment documentation in support of personal performance fosters reflection and self-awareness.

Students are encouraged to adopt a reflective approach to their learning throughout the course.

The use of information technology plays an active role throughout the course.

Assessment methods include practical projects, presentations, coursework, peer- and self-assessment.

## 10 Programme structure and requirements, levels, modules, credits and awards

The MSc programme is normally studied over one year and one term full-time or two and a half years part-time. Students may, if they wish move between full, part-time and flexible modes of attendance. Traditional delivery is determined by the academic year which is divided into semesters of approximately 15 weeks each, which run from September to January and January to June.

Flexible delivery enables students to undertake the programme within the traditional two year period for part-time study. The course is divided into 5 distinct study units; four modules, (30 credits) and a Master's project (60 credits). Students complete 60 credits at the Postgraduate Certificate stage, 120 credits at the Postgraduate Diploma stage and 180 credits at the MSc stage. Each credit represents 10 hours of student learning and assessment.

The structure of the course, the module, levels and credit ratings and the awards that can be gained are shown below. Personal Development Planning is an integral part of the learning process of each element of the course.

### Stage 1

Element Name	Credit
<b>INTEGRATED PROJECT AND PROCESS MANAGEMENT</b>	<b>30</b>
<p>This module provides a foundation of project and operations management which has relevance to all aspirant managers, and explores the concept of marketplace positioning with a view to ensuring organisational responsiveness to a changing global environment.</p> <p><b>Managing Projects</b> - Concepts, functions and policies  <b>Managing Operations</b> - Concepts, process design, operations management, planning and scheduling, building in quality  <b>Marketplace Positioning and Supply Chain Integration</b> - Supply chain integration, competitive tendering, managing across cultures.</p>	
<b>DISTRIBUTION AND MATERIALS MANAGEMENT</b>	<b>30</b>
<p><b>Material Management</b> – Management of Materials through the Supply Chain, Manufacturing Strategies, Analysis of Materials Handling Systems, Data Capture of Materials Movement.  <b>Distribution Systems</b> – Transportation Characteristics, Distribution, Planning &amp; Control, Strategic Issues in Physical Distribution, Support Systems.  <b>Modelling the Supply Chain</b> – Development of Simulation systems, Simulation Design, Modelling of the External Supply</p>	

Chain, Modelling of the Internal Supply Chain, Graphical Simulation, Implementation of Simulation.

**Award: Postgraduate Certificate (60 credits)**

**Stage 2**

Element Name	Credits
<p><b>RESOURCE MANAGEMENT</b></p> <p>This module draws together three distinct yet related aspects of resource within the organisation and offers students an opportunity to develop skills in managing each and identifying how these areas integrate.</p> <p><b>Developing Human Capability</b> - Leadership, customer relations, culture, change, diversity, HR Tools and competences  <b>Developing Financial Capability</b> - Investment appraisal, financial contextualisation  <b>Developing Technology Capability</b> - Information Management, systems thinking, enterprise data modelling.</p>	<p><b>30</b></p>
<p><b>STRATEGIC PLANNING FOR THE SUPPLY CHAIN</b></p> <p><b>Finance and Strategy Management</b> - Financial Structure, Investment Appraisal Methods, Corporate Strategy.  <b>Pipeline Management and Control</b> - Business Drivers, The Manufacturing Environment, Demand-driven Logistics, Control of the Pipeline.  <b>Supply Chain Strategy</b> - Supply chain strategic design factors, Supply chain strategic management factors, Materials management strategic factors, Product development strategic factors, Facility management strategic factors.</p>	<p><b>30</b></p>

**Award: Postgraduate Diploma (120 credits)**

**MSc Stage**

Element Name	Credit
<p><b>MASTER'S PROJECT</b> -</p> <p>The project is the ultimate test of the student's ability to integrate and synthesise what has been learnt on the course. It provides an opportunity to apply knowledge gained to a substantial practical problem.</p>	<p><b>60</b></p>

**Award: MSc (180 credits)**

## MSc Supply Chain Management Structure

**MSc 180 Credits**

### **Master's Project**

Including support to develop the project proposal and research plan and the write-up

60 Credits - 600 hours (30 weeks)

**PgC 120 Credits**

### **Resource Management**

30 Credits 300 Hours

### **Strategic Management for the Supply Chain**

30 Credits 300 Hours

**PgC 60 Credits**

### **Integrated Project and Process Management**

30 Credits 300 Hours

### **Distribution and Materials Management**

30 Credits 300 Hours

## 11 Support for Learning

Students are encouraged to identify and, with guidance, to reflect on their own learning needs and are offered the following support as appropriate to those needs:

A student handbook containing information relating to the University, TIC and the modules of study.

An introduction to flexible study and on-line support for students on the flexible mode.

A virtual learning environment to support students remotely via collaborative tools and technologies.

An induction programme dealing with orientation and the dissemination of essential information.

A dedicated Learning Centre with open access learning materials, resources and full-time staff specialising in a variety of support areas.

Access to teaching, support and management staff.

Access to the services of the Learning Centre and IT support staff.

Postgraduate website accessed through TIC intranet.

Access to TIC and BCU resources seven days per week e.g. Library, eLearning materials – outside normal class times.

Access to student services, including Students Union.

## 12 Criteria for admission

Candidates must satisfy the general admissions requirements of the programme, which are as follows:

Minimum 2(ii) Honours degree from a UK University or equivalent in a relevant subject.

### **Alternative Entry Routes**

Students who do not hold the standard entry requirements may be considered for admission provided they can satisfy the Course Director and relevant Module tutors that their qualifications and/or industrial experience are equivalent to that attained through the completion of an appropriate honours degree programme.

### 13 Evaluation and improvement of quality and standards

<b>Committees:</b> Course Consultative Committee Board of Studies Examination Board Learning Management Committee (LMC) Faculty Board Academic Quality and Support	<b>Mechanisms for review and evaluation:</b> Review and validation events Annual Monitoring Report Student feedback questionnaires Annual staff appraisal External Examiners' Reports Course Consultative team meetings Course team annual Away Day
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### 14 Regulation of assessment

Details of the mechanisms and criteria for assessment in individual modules, and the means of determining final degree classifications, are published widely. Students are issued with copies of the University's Standard Postgraduate Assessment Regulations on commencing the course, and individual and collective guidance is given by academic staff on their operation at appropriate times throughout the course. The Standard Postgraduate Assessment Regulations are continuously reviewed to ensure compatibility with the National Qualifications Framework.

To qualify for a **Postgraduate Certificate** a student must successfully complete all required assessments and obtain a minimum of 60 credits of which at least 30 must be at Level 7. The pass-mark in all elements is 40%

The award of Postgraduate Certificate is not differentiated.

To qualify for a **Postgraduate Diploma** a student must successfully complete all required assessments and obtain a minimum of 120 credits of which at least 90 must be at Level 7. The pass-mark in all elements is 40%.

The award of **Postgraduate Diploma with Commendation** is made to students who achieve an average mark of 60% at the first sitting in the marks awarded for Stage 2 Modules equivalent to at least 60 credits.

The award of **Postgraduate Diploma with Distinction** is made to students who achieve an average mark of 70% at the first sitting in the marks awarded for Stage 2 Modules equivalent to at least 60 credits.

To qualify for a **Master's Degree** a student must successfully complete all required assessments and obtain a minimum of 180 credits of which at least 150 must be at Level 7. The pass-mark in all elements is 40%.

The award of **Masters Degree with Commendation** is made to students who achieve an average mark of 60% at the first sitting in the marks awarded for the Master's Project, which is equivalent to at least 60 credits.

The award of **Masters Degree with Distinction** is made to students who achieve an average mark of 70% at the first sitting in the marks awarded for the Master's Project, which is equivalent to at least 60 credits.

**External Examiners** are appointed. Their work includes:

- approving coursework assignments and assessment criteria
- approving examination papers
- monitoring standards through moderation of completed assessments
- attending Examination Boards
- participating in the review and validation processes.

# MSc Supply Chain Management

## Student Guide

### Background

Supply Chain Management addresses the main aspects of operations of both product based and service industries. It is concerned with the initial design process, sourcing of materials to the long-term satisfaction of the customer. Customer satisfaction is achieved by ensuring the supply of the right goods, in the right quantity of the right quality at the right price to the right place at the right time.

The aim of the course is to produce competent, innovative practitioners and managers who can apply the principles of logistics, marketing, strategy and financial control to the solution of operational and strategic supply chain problems in both industry and commerce. The course provides an academic base that will contribute to the development of knowledge and an opportunity to apply that knowledge to real problems.

You will develop your skills which will allow you to carry out analysis of supply chains and give you the ability to design solutions involving multi-functional activities across supply chains. This multi-functional approach is developed through an understanding of why the integration of all the activities in the organisation is necessary to achieve good Supply Chain Management practice.

You will develop a thorough understanding of various tools and techniques used in current best practice, their interrelationship and how to best apply relevant parts of this toolkit in the solution of practical supply chain problems.

By the end of the course you will be able to analyse how current logistical techniques in material flow, cost control and information technology enables the effective integration of supply chains.

### What does the industry want?

There is a growing market need for practitioners and managers with the necessary knowledge to identify and provide solutions to a wide range of logistical problems. This course is designed to produce men and women who can operate at a professional/managerial level in this field.

### What type of work will I do?

The content and structure of the course are designed to produce postgraduates with a broadly based but technologically orientated education. The modules are:

- **Integrated Project and Process Management** – Introduction to project management, operations management, supply chain management and integration.
- **Distribution and Materials Management** - Materials Management, Distribution Systems and Modelling the Supply Chain.
- **Resource Management** – Developing human resource management skills, financial management, technology capability

- **Strategic Planning for the Supply Chain** - Supply Chain Strategy, Finance and Strategy Management and Pipeline Management and Control.
- **Master's Project**

You will experience a wide variety of subjects and many different types of learning environment including lectures, tutorials, and practical and computer laboratories. The course incorporates a significant amount of mini project work to provide students the opportunity to develop and apply their knowledge.

### **Am I just going to be taught from a Classroom?**

No. Regardless of the delivery mode the student experience is not confined to the classroom. Within traditional delivery the programme will use visits to various organisations, and introduce relevant industrial speakers to support learning.

Flexible delivery combines face-to-face sessions with fully supported on-line study. As a student would expect from the 'technology innovation centre' cutting edge collaborative tools and technologies are used to facilitate learning.

### **Who will teach me?**

The course team is based at the Technology Innovation Centre which is part of Birmingham City University. In addition, external industrialists are used to provide guest lectures/seminars, offering more substantial support across entire modules and complementing existing academics.

### **What are my employment prospects?**

Industry and commerce are seeing a fundamental shift in the way in which they work. Supply Chain Management, Competitive Manufacture and Logistics are essential to the competitiveness of organisations and companies need personnel with the vision to understand the issues and the ability to implement solutions and new procedures to attain the competitive advantage.

Areas that you would consider after completion of this course would include:

- Supply Chain Development
- Operations Management
- Contract Management
- Demand management
- Supply Chain Planners
- Research or Further Study

This list is by no means exhaustive but does reflect the broad range of roles you may consider in the next phase of your career development.

### **How do I apply?**

University Faculty: Technology Innovation Centre  
 Course Length: 1 year + 1 term full-time and normally 2½ years part-time  
 Flexible mode <2 years part-time  
 Location: Millennium Point, Curzon Street, Birmingham B4 7XG  
 Enquiries: Information Officer (at the above address) or at  
 enquiries@tic.ac.uk or Telephone: (+44) (0)121 331 5400

# MSc Supply Chain Management

## Employer Guide

### Introduction

Supply Chain Management addresses the main aspects of operations of both product based and service industries. It is concerned with the initial design process, sourcing of materials to the long-term satisfaction of the customer. Customer satisfaction is achieved by ensuring the supply of the right goods, in the right quantity of the right quality at the right price to the right place at the right time.

The aim of the course is to produce competent, innovative practitioners and managers who can apply the principles of logistics, marketing, strategy and financial control to the solution of operational and strategic supply chain problems in both industry and commerce. The course provides an academic base that will contribute to the development of knowledge and an opportunity to apply that knowledge to real problems.

### Facilities / Partnerships

Students following the programme will be based within the Technology Innovation Centre, (a part of Birmingham City University). The Technology Innovation Centre is located at Millennium Point, a £114m development in the centre of Birmingham. The course makes full use of industrial visits and guest speakers encompassing a wide range of expertise. The Course can boast strong industrial links with companies in the areas of Manufacturing, Distribution, Retail and Service Industries.

### Programme Aims

The course aims to develop the skills to allow the analysis of supply chains and the ability to design solutions involving multi-functional activities across supply chains. It will allow the student to develop an understanding of why the integration of all the activities in the organisation is necessary to achieve good Supply Chain Management practice.

The course will provide an opportunity for the student to develop a thorough understanding of various tools and techniques used in current best practice and their interrelationship. It will allow the student to apply relevant parts of this toolkit in the solution of practical supply chain problems.

Students will analyse how current logistical techniques in material flow, cost control and information technology enables the effective integration of supply chains.

### The Curriculum

The Supply Chain Management Master's course offers the following modules;

- **Resource Management** – Developing human resource management skills, financial management, technology capability

- **Integrated Project and Process Management** – Introduction to project management, operations management, supply chain management and integration.
- **Distribution and Materials Management** – Distribution Systems, Materials Management, Modelling the Supply Chain
- **Strategic Planning for the Supply Chain** – Supply Chain Strategy, Pipeline Management and Finance & Strategy Management.
- **Master's Project**

### **Expected Outcomes**

Postgraduates can be expected to have acquired extensive knowledge and hands-on practical experience of sound supply chain practices. The specialist modules will allow the student to enhance their skills and knowledge in the areas of supply chain operations and design.

### **Contact Details**

University Faculty: Technology Innovation Centre  
 Course Length: 1 year + 1 term full-time and normally 2½ years part-time  
 Flexible mode <2 years part-time  
 Location: Millennium Point, Curzon Street, Birmingham B4 7XG  
 Enquiries: Information Officer (at the above address) or at  
 enquiries@tic.ac.uk or Telephone: (+44) (0)121 331 5400