MASTER OF SCIENCE IN CONSTRUCTION PROJECT MANAGEMENT AWARDED BY BIRMINGHAM CITY UNIVERSITY (BCU)

PROGRAMME SPECIFICATION

PROGRAMME PHILOSOPHY AND AIMS

The construction industry is extremely dynamic throughout the world supporting regeneration as well as developing economies. Managing a construction project from inception and design right through to occupation requires a wide range of skills and involves many people as a project must be delivered safely, on time, on budget and to the highest possible quality. Clients have become more demanding, the regulatory framework has become more complex, and technology plays an increasingly important role. Furthermore, the construction industry is facing the challenge of globalisation and climate change. The complexity of construction projects requires construction professionals to have expertise in construction project management and can work effectively with people from different cultural background. As construction activities have an imminent and long-lasting effect on the environment, sustainable and environmentally sound construction methods and innovative management practices are needed. Demand for highly skilled, innovative and far-sighted construction project managers is constantly increasing.

This MSc Construction Project Management programme seeks to respond to a changing employment market and to the changing requirements of the construction industry. It aims to give you a broad yet rigorous grounding in the fundamentals of organising and managing construction projects. It seeks to provide you with the knowledge and skills that will meet the challenges presented by these changes and provides opportunities for cognate graduates from diverse backgrounds including international students, students with limited professional experience, as well as students looking for mid-career development in a construction project management specialist area. This programme will challenge you to question their current thinking and the practices adopted in a rapidly changing global construction industry, and develop their abilities to be innovative and creative in solving practical problems. This programme is designed to promote critical thinking and problem solving, and encourage students to engage in life-long learning and become an independent professional learner.

The programme aims to:

- Enable students to become capable, creative, reflective and critical construction project management professionals
- Cultivate students' problem-solving skills through real-life cases and facilitate students develop a systematic understanding and a critical awareness of the problems, issues and opportunities in the construction project management practice.
- Improve students' awareness and appreciation of the conflicting interests within construction projects and the political, social, cultural, economic, technological, environmental, legal and organisational factors involved.
- Develop students' professional competences and prepare them for employment opportunities and career development within a global construction industry.
- Expose students to good construction practices in different countries and encourage intercultural experience and collaboration to foster a strong global perspective

6423 9580 / 9590 www.gstm.edu.sg 420 North Bridge Road, North Bridge Centre, #02-06, Singapore 188727

Intended learning outcomes and the means by which they are achieved and demonstrated:

Learning Outcomes

Outcomes/Aims	Pursuing Excellence	Practice Led Knowledge Applied	Interdiciplinarity	Employability Driven	Internationalisation
1. Knowledge & Understanding					
1.1 Identify and define problems in the management of construction projects	☒	☒	☒	☒	☐
1.2 Understand the principles and basic methods of managing construction projects	☒	☒	☒	☒	☐
1.3 Appreciate the different construction project management practices	☒	☒	☒	☒	☒
1.4 Explain and discuss the process of the management of construction projects	☒	☒	☒	☒	☐
2. Cognitive & Intellectual Skills					
2.1 Debate logically and coherently on issues in the management of construction projects	☒	☒	☒	☒	☐
2.2 Differentiate the diverse and multiple perspectives involved in the management of construction projects	☒	☒	☒	☒	☒
2.3 Synthesise theory and practice to design / implement practical solutions	☒	☒	☒	☒	☒
2.4 Conceptualise new practice through lateral thinking	☒	☒	☒	☒	☐
3. Practical & Professional Skills					
3.1 Apply competently the contemporary technologies used in the management of construction projects	☒	☒	☒	☒	☐

6423 9580 / 9590 www.gstm.edu.sg 420 North Bridge Road, North Bridge Centre, #02-06, Singapore 188727

3.2 Evaluate different options available in the management of construction projects	☒	☒	☒	☒	☒
3.3 Make incisive decisions through an explicit and systematic understanding of the political, social, cultural, economic, technological, environmental, legal and organisational factors in the management of construction projects	☒	☒	☒	☒	☒
3.4 Apply research and advanced scholarship skills to inquire into the management of construction projects	☒	☒	☒	☒	☐
4. Key Transferable Skills					
4.1 Communicate in various forms coherently and comprehensibly to a diverse range of audience	☒	☒	☒	☒	☐
4.2 Work professionally and ethically with other people and contribute to team goals	☒	☒	☒	☒	☐
4.3 Access and make appropriate use of relevant materials and information	☒	☒	☐	☒	☐
4.4 Show confidence, self-awareness and self-reliance through critical reflection	☒	☒	☐	☒	☐

Learning teaching, and assessment methods used

The overall teaching, learning and assessment strategy of the course is that you are at the centre of learning and teaching, with a particular focus on the reflective learner and the development of professional skills and applied research. To achieve this and to ensure that you are exposed to a wide range of learning and teaching methods, the course team will use lectures, seminars, workshops, action learning sets, group work, problem-based activities, guest speakers, on-line learning via Moodle, site visits, study trips and discussion forums. Our teaching is very interactive, and students are encouraged to share their experience and opinions with their peers. Critical thinking is vital in Master's study, and students are required to develop their own conclusions based on solid evidences and logical analysis.

Although this programme is module based, each module forms part of one of the programme themes. This ensures that module design and associated teaching and assessments link together in progressive subject development. Various assessment methods will be used in this programme to address the different needs of individual modules, including exam, essay, portfolio, individual/group presentation, and dissertation. Written and/or oral feedback and feedforward will be provided through Moodle, email, and group/1-2-1 tutorial.

6423 9580 / 9590 www.gstm.edu.sg 420 North Bridge Road, North Bridge Centre, #02-06, Singapore 188727

PROGRAMME SYNOPSIS

Module 1: Integrated Project Delivery (20 Credits)

This module takes a production process view of design, construction and operation enabling students to appreciate developments in effectiveness and efficiency and how these can be managed. This will consider concepts such as transformation, flow and value creation to understand the notion of integrated project delivery.

In this module, students will take a production process view of design, construction and operation, examining developments in effectiveness and efficiency, and how these can be managed and applied to construction projects. Key aspects of the module include design and construction management; integrated procurement strategies; managing human and technological resources; BIM processes, standards and their implications on construction projects; creating and executing plans using workflow and responsibility matrices. Students will consider concepts such as transformation, flow and value creation in order to develop fundamental intellectual and technical skills, as well as an understanding of the notion of integrated project delivery.

Module 2: Construction Law and Contract (20 Credits)

This module seeks to help the students understand and evaluate construction contracts, their application and execution, as well as the legal aspect of construction. The module is designed to make the students develop a systematic understanding of the knowledge and critical awareness of the issues and opportunities for the management of construction projects. It also seeks to make the student aware of and appreciate the conflicting interests within construction projects and the need to manage such interests effectively. To be able to manage such interests, the module prepares the students to be aware of the legal and organisational factors at play in the construction industry and the methods available for managing/resolving disputes that may occur during the execution of projects.

This module will provide students with an understanding of construction contracts, their application and execution, and the legal aspects of working in construction. Students will examine the issues and opportunities that arise in construction project management, as well as the legal and organisational factors at play in the industry. Studying real-life projects and case studies, Students will explore forward-thinking approaches to identify and apply best practice to problems in construction projects, particularly relating to commercial and contractual aspects, and students will develop interpersonal, communication and leadership skills to prepare you for managerial roles.

Module 3: Sustainable Construction (20 Credits)

The module seeks to respond to a changing employment market and to the changing requirements of the construction industry. Its aim is to give you a broad yet rigorous grounding in the fundamentals of organising and managing construction projects. This module is consistent with this philosophy as it discusses the reality of construction activities which have a long-lasting effect on the environment therefore sustainable and environmentally sound construction methods and innovative management practices are needed.

6423 9580 / 9590 www.gstm.edu.sg 420 North Bridge Road, North Bridge Centre, #02-06, Singapore 188727

In this module, students will explore the effect that construction activities have on the environment, and examine the environmentally sound construction methods and innovative management practices that are required to work sustainability. Students will develop your awareness of sustainable construction through evaluating industry responses to climate change and sustainability, critically reflecting on what constitutes good practice, and developing creative solutions to the challenges faced. This module will give students a rigorous grounding in the fundamentals of organising and managing construction projects within the changing global construction industry, enabling students to become a more capable, creative, reflective, and critical construction professional.

Module 4: Project Management Methods (20 Credits)

This module explores various methods of project management within the context of construction. It explores the practical aspects of the development and construction process and in particular, those areas over which a Project Manager would expect to have some control. Themes such as specifications, programming, costing, stakeholder, risk and project control are addressed towards providing practical solutions. This module focuses on the practical skills needed for a project manager to effectively manage a construction project.

This module explores various methods of project management within the context of construction. Students will learn about the practical aspects of the development and construction process, and in particular, those areas over which a project manager would expect to have some control. Themes such as project specifications, programming, costings, stakeholder management, risk assessment and project control are addressed and practical solutions are explored.

Module 5: Business Management (20 Credits)

This module seeks to provide students the opportunity to critically examine and analyse topical business management issues in a construction organisational context. Through business management techniques and contemporary case studies, students will explore strategic and operational business issues in the construction environment such as economics, accounting and finance, market development, corporate social responsibility, resource and knowledge management, etc. This module develops students' contextual awareness and competencies in business management so that they can better manage their projects and are ready to progress in their career.

In this module, students will explore strategic and operational business issues in the construction environment such as economics, accounting and finance, market development, corporate social responsibility, and resource management.

Module 6: Innovation in Construction (20 Credits)

This course is seeking to create effective, efficient and creative managers of construction projects from design right through to occupation. Innovation is a key aspect of this both in managers' ability to conceive of new approaches but also to implement series of improvements and to cope with disruption. The module takes a 'learning approach' to innovating considering this at both the system level and the individual level. In this, it explores and challenges different conceptions of innovation

6423 9580 / 9590 www.gstm.edu.sg 420 North Bridge Road, North Bridge Centre, #02-06, Singapore 188727

and seeks to devise strategies for implementation and success within different contexts. This issue of context is particularly important because of the differences in international locations of the students. The ideas of change and change management are fundamental and it is assumed that to be successful people and organisations need to learn to change. Innovation can be radical or incremental and the rewards from these need to be balanced with the risk of not achieving implementation. Innovative ideas can be presented as externally driven which tend to be disruptive and internally driven which may appear benign. The evaluation of the success of innovation is exceptionally complicated made worse by the hidden self-interest and rhetoric. Thus, learning to inquire into the realities of innovation within the context of application is key to improvement. This module also promotes thinking which will be particularly useful for dissertation.

This module creates effective, efficient and creative construction project managers, focusing on innovation throughout the design process from planning to implementation. Innovation is a key skill in the conception and development of new approaches, as well as when implementing improvements and overcoming problems. This module explores strategies for implementation and success within different contexts, with a focus on the differences in international locations. Students will apply innovative thinking to the real world, considering risks, rewards, application and evaluation. Creative thinking skills developed in this module will also be put into practice in other modules, especially the Individual Master's Project.

Module 7: Individual Master's Project (Dissertation) (60 Credits)

This project is the culmination of the Master's study; using the previous studies and current modules as a foundation, students will carry out research into a practice-based problem, and develop their ability to theorise and conceptualise. This project will allow students to build understanding and expertise in a selected area of specialised study relating to construction and project management, providing you with a good foundation to build a career in the area that most interests you. In the first semester students will explore research methods that will guide their project, and they will then work with their assigned supervisor to develop their ideas.

6423 9580 / 9590 www.gstm.edu.sg 420 North Bridge Road, North Bridge Centre, #02-06, Singapore 188727