



Master of International Construction Management

with Major in Construction Productivity

Conferred by the University of Florida



INTRODUCTION

Tremendous growth in the international construction market has created opportunities for companies to engage in businesses across international frontiers. With increasing complexities and growing demand for higher construction productivity, effective management of construction resources must be integrated with technology, people and processes. This Master of International Construction Management degree with a Major in Construction Productivity is designed to enable working professionals to expand and improve their skills in managing construction projects in international markets, and develop competencies in the latest construction productivity methodologies. This program is intended for working professionals who are making vital business decisions and have the potential to be future leaders who will guide the construction industry in attaining even higher levels of excellence.

PROGRAM UNIQUENESS

Specialized knowledge in construction management and productivity

Good construction management must vigorously pursue the efficient utilization of resources with the integration of technology, process and people. This program provides a specialized curriculum that embodies key aspects of construction management and productivity methodologies and expands cutting edge tools and strategies such as Virtual Design and Construction (VDC), Building Information Modelling (BIM), Lean Construction and Design for Manufacturing and Assembly (DfMA).

Outstanding construction management program offered by a top tier university

The University of Florida is one of the top-ranked US universities and is renowned for excellence in education and research. The M.E. Rinker, Sr. School's construction management program has been recognized as an outstanding program by the Associated General Contractors Education and Research Foundation. It is the first school to receive accreditation from the American Council for Construction Education (ACCE) and is also the longest running school of construction in the US.

Blended learning

This postgraduate program is specially designed for professionals in the built environment industry and is delivered in the form of blended learning modes including face-to-face sessions, video-conferencing and online learning. This provides flexibility in fulfilling students' needs, expectations and schedules.

PROGRAM STRUCTURE

No	Course Code	Course Name	Credit
1	-	Introduction Seminar	0
2	ICM 6775	Manufactured Construction Processes	3
3	ICM 6680	Principles of Sustainable Construction	3
4	ICM 6762	International Construction Risk Management	3
5	ICM 6905	BIM coordination and VDC	3
6	ICM 6761	Advanced Planning, Scheduling, & Logistics	3
7	ICM 6716	Construction Productivity and Methods Improvement	3
8	ICM 6420	Commercial Management and Cost Control	3
9	ICM 6710	Construction Human Resource Management	3
10	ICM 6930	Construction Communications & Research	3
11	ICM 6440	Construction Value Management	3
12	ICM 6934	Construction Research	3
Total Credits			33

*Courses offered in the programme are subjected to a minimum class size. BCA Academy reserves the right to replace the courses shown above with equivalent ones.

ABOUT THE UNIVERSITY OF FLORIDA

Established in 1853, the University of Florida (UF) is ranked seventh among public universities in the 2019 U.S. News and World Report Best Colleges rankings. Its 46,000 students come from all 50 U.S. states and more than 100 countries around the world. The 2,000-acre campus has nearly 5,000 distinguished faculty members with more than US\$9294 million in sponsored research funding annually. The University comprises 16 colleges with more than 200 research, service and education centers, bureaus and institutes. UF currently offers 100 undergraduate degree programs, more than 200 graduate programs, and 30 certificates.

ABOUT THE RINKER SCHOOL



The M.E Rinker, Sr School of Construction Management is the oldest construction management program at the university level in the U.S., established in 1935 as a degree program in architecture. In 1948 the Master's degree program was created as the first in the US. After the Second World War there was a rapid growth in enrolment and by 1957 the student numbers in building construction were large enough to justify the program as a department status. In 1976, the program evolved into the status of a

School within the College of Architecture and was renamed the M.E. Rinker, Sr. School of Construction Management. Coincidentally, in the same year the Construction Management program was accredited by the American Council for Construction Education (ACCE). The Ph.D. program was established in 1988. Today, the original building construction curriculum has evolved from a variation of architecture to a full-fledged academic discipline with a strong emphasis on construction management.

ABOUT BCA ACADEMY

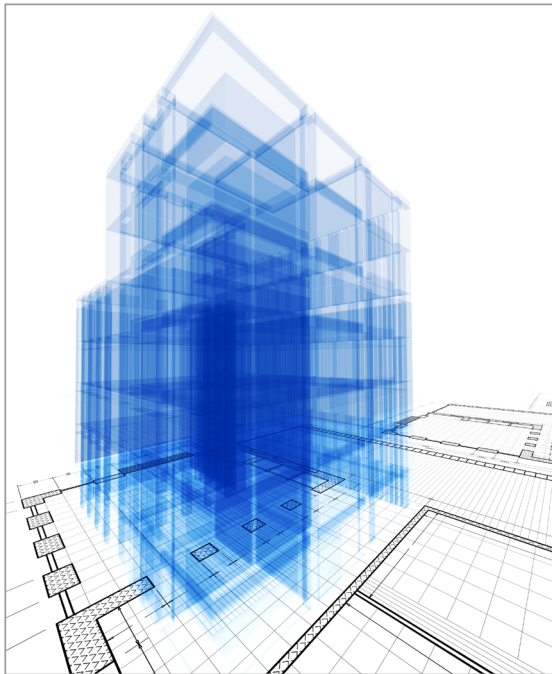
BCA Academy is the education and training arm of the Building and Construction Authority (BCA), Singapore. Since its establishment in 1984, BCA Academy has been providing quality training and education pathways for a diverse group of audience. It offers wide range of built environment programmes which are rigorous and practice-oriented. At BCA Academy, training pedagogy is enhanced through various on-campus learning galleries and experiential learning features of the training facilities. Through the years, the Academy has been producing quality graduates who excel in their jobs. BCA Academy also partners with established universities to deliver leadership programmes to develop the managerial and technical competencies of the industry leaders, who play a crucial role to future-proof the built environment sector.



COURSE SYNOPSIS

ICM 6761 Advanced Planning, Scheduling, & Logistics

This module provides students with a comprehensive understanding of the problems associated with the planning and control of a project, and the methods and tools available to ensure an effective solution to overcome these problems. The graduate students will be exposed to both traditional and advance planning tools to better understand and solve complex planning, monitoring and control problems arising in construction projects. The course concludes with an overview of the future direction of project planning.



ICM 6905 Building Information Modeling (BIM) Coordination and Virtual Design and Construction (VDC)

This module provides an understanding of how Building Information Modeling (BIM) and Virtual Design and Construction (VDC) can be integrated throughout the life-cycle of project delivery to overcome the complexity of managing collaborative design and construction by interdisciplinary teams. By the conclusion of this class, graduate students are able to identify the complexity of working in interdisciplinary teams on construction projects; discuss the importance of collaboration through the use of BIM technologies; how the interoperability of BIM technologies are important in

the BIM process; using BIM for planning, project coordination, cost control, and facilities management; key aspects of VDC for project delivery; and applying and integrating BIM and VDC with project and business strategies.

ICM 6710 Construction Human Resource Management

The module content will examine human behaviors and how they affect the construction management process. Coverage includes nature of human factors, perception and attitudes in the workplace, emotions and stress in construction workplaces, influence and decision making, and many other behavioral factors that can be experienced when working in the construction arena.

ICM 6420 Commercial Management and Cost Control

This module covers a systematic approach to managing cost throughout the life cycle of any construction project. It provides a platform where students will learn to apply cost engineering techniques used during preconstruction, construction and post construction. It will also introduce cost elements for life cycle of assets and how cost is measured, applied, and recorded to derive the total activity cost in a construction project.

ICM 6930 Construction Communications & Research

This course familiarizes the student with the research proposal development process and the statistical, computational, visualization, and presentation tools available to the researcher. The course will parallel the organization of a research proposal.

COURSE SYNOPSIS

ICM 6716 Construction Productivity and Methods Improvement

The objective of this module is to examine the factors that impact construction productivity, the use of management tools to develop construction productivity improvement programs, methods for performing construction loss calculations, and strategies for developing productivity improvement programs for the construction environment. Higher productivity drives greater profitability by improving cost and schedule performance. Throughout the module, emphasis will be placed on techniques and methods that can manage and increase the efficiency of cost and schedule parameters. This module is designed to provide guidance to an owner, contractor, subcontractor, or construction manager on methods and processes by which construction productivity can be effectively managed and increased.

ICM 6934 Construction Research

A research project is required for students to complete the Masters' program. Supervised by an academic staff, students are encouraged to select research topics in the area of construction productivity.

ICM 6440 Construction Value Management

Through this module, students will understand the roles of Value Engineering (VE) in construction. Classical VE principles will be emphasized and practical applications for construction managers, contractors, and other construction functions will be described in the course of study. At the completion of the module, students will be able to demonstrate their abilities to understand the concepts of VE with the emphasis on Functional Analysis and Life Cycle Costing; understanding the use of VE in construction industry; apply VE to construction company business and industry technical situations and; understanding and applying of VE problem solving techniques as a management tool.

ICM 6680 Principles of International Sustainable Construction

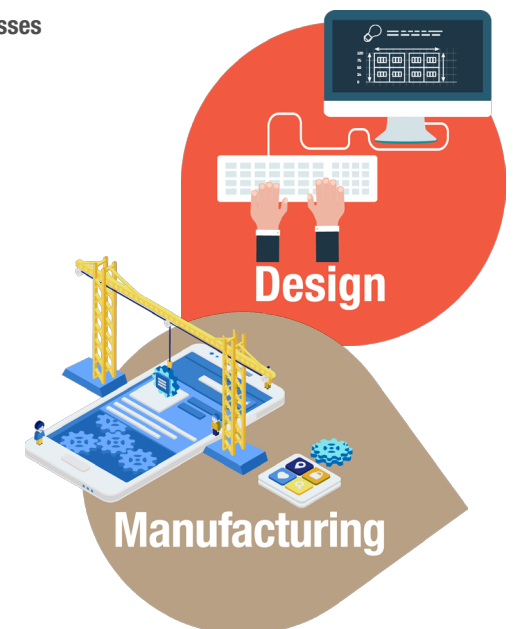
Techniques for creating good indoor and outdoor environments, renewable resources, conservation, low environmental impact methods, life cycle assessments.

ICM 6762 Construction Risk Management

Overview of what is meant by risk and uncertainty and influences in the construction industry.

ICM 6775 Manufactured Construction Processes

The importance to sustainable benefits for the design, construction, and life-cycle of manufactured and modular construction will be introduced in this module. The course compares and contrasts construction practices and methods and evaluates processes on an international scale (i.e., United States, Japan, Germany, India). This module will examine the concepts of pre-manufactured and modular design and construction, and application of lean concepts to the evaluation of construction and design techniques and practices. In this study process, graduate students will acquire knowledge to create models that allow accurate comparisons across financial, sustainable and life cycle methodologies and tools for manufactured construction.



ASSESSMENT OF PROGRAM

The program offers a good combination of continual assessment and final examination. Apart from the Research Project which is purely project-based, the assessment for every course varies and may include but is not limited to quizzes/tests, group projects, individual assignments, and examinations. Students must maintain a 3.0 grade point average (GPA), and pass a comprehensive final exam at the completion of their course work.

MODE OF DELIVERY

The delivery of the courses will be through asynchronous, synchronous, and face-to-face lessons. Any face-to-face lessons will be conducted at the BCA Academy in Singapore. Such lessons may include intensive block teaching. (E.g. Thursday evening with full days on Friday and Saturday) The mode of lesson delivery listed here is for reference and may be subjected to changes. Each credit unit is equivalent to 15 hours of lessons.

ADMISSION REQUIREMENTS

To be eligible for admission to the program, the candidate must have:

- An undergraduate degree from an accredited institution of higher learning where a bachelor's degree involving four or more years of study was earned with at least a 3.0 GPA (on a 4.0 scale), equivalent to an average grade of a B.
- At least 2 years of relevant work experience for applicants with a relevant undergraduate degree (construction management, architecture/architectural, civil and mechanical engineering degrees), or 5 years of relevant work experience for applicants with other undergraduate degrees.
- Applicants who graduated with their undergraduate degree from countries where English is not the official language must meet the requirement of the English proficiency test before 25 Jun 2021. Applicants are also exempted from the English proficiency requirement if enrolled for one academic year in a degree seeking program at a recognized/regionally accredited university or college in a country where English is the official language prior to their anticipated term of enrolment at UF. A complete list of country exemptions can be found at <http://admissions.ufl.edu/apply/international/countries>.

The minimum acceptable admission scores for the English Proficiency Test are:

- TOEFL: 550 (paper test); 80 (internet based)
 - IELTS: 6
 - Please note: The TOEFL ITP is not accepted for admission purposes.
- Applicants may need to be interviewed online by UF Faculty prior to admission.

FEES

Applicants are required to pay non-refundable application fees to UF and BCAA. The Stage 1 application fee payable to BCAA is at S\$45 (inclusive of GST) and in Stage 2 application fee payable to UF is at USD \$37 (inclusive of convenience fee).

The total program fee for the two-year, part-time Master's program is USD22,110 before any funding subsidy. The trimester tuition and fee is calculated based on the number of credits the student will be taking in a particular trimester multiplied by USD670 per credit. Students are required to pay trimester tuition and fee directly to UF before the commencement of each trimester.

AWARD

Students who satisfy the assessment requirements of all respective course and their Research Projects will be awarded the Master of International Construction Management degree with Major in Construction Productivity. Such award, including the transcript, will be the same as those conferred for studies on campus at the University of Florida.

WORKFORCE TRAINING AND UPGRADING (WTU) FUNDING

Eligible candidates may apply for Workforce Training and Upgrading (WTU) funding of up to S\$14,025 for studying in this program. The general conditions tied to WTU funding are as follows:

- The candidate's company must be in the construction sector
- The candidate must be a Singaporean or Singapore Permanent Resident
- The candidate must achieve a minimum class attendance of 75%
- The candidate must successfully complete all assessments in the program

For more information on the WTU scheme, please visit: <https://www1.bca.gov.sg/buildsg/buildsg-transformation-fund/workforce-training-and-upgrading-scheme-wtu>

APPLICATION

The application for the programme is a 2-stage process, and both stages are compulsory.

Stage 1

Interested applicant shall submit an online application and a non-refundable application fee of S\$45 (inclusive of GST) to BCAA. Stage 1 application closes on 11 Jun 2021. For stage 1 application, please complete and submit an online form via the following link: <https://form.gov.sg/603f35dcb2f18001190bc8e>

Stage 2

Successful applicants for Stage 1 will be notified. BCAA will then guide the applicants on the stage 2 application to UF. A non-refundable application fee of US\$37 (inclusive of convenience fee) will be payable to UF. The Stage 2 application closes on 18 Jun 2021.

All information in this booklet is correct at the time of printing.

Please log on to our website at www.bcaa.edu.sg/what-we-offer/academic-programmes/masters-degree for the latest information.

FOR FURTHER DETAILS, PLEASE CONTACT:

Admission Advisor: **Ms Bernice Ang** Tel: 6248 9944, Email: Bernice_Ang@bca.gov.sg

Academic Consultant: **Ms Cindy Ng**, Tel: 6248 9923, Email: Cindy_Ng@bca.gov.sg

BCA Academy reserves the rights to amend the course or program details, content and application fees without prior notice. It also reserves the right to cancel or postpone the course or program due to unforeseen circumstances.



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200 Braddell Road Singapore 579700
www.bcaa.edu.sg