

Curriculum Details

Master of Science Program in Construction Project Management (Revised Curriculum 2022)

Name of Institution: Silpakorn University
Campus/Faculty/Department: Wang Tha Phra/Faculty of Architecture/
 Department of Architectural Technology

Number and Title of the Program

Number of the Program: 25470081102363
Title of the Program: Master of Science Program in Construction Project Management

Name of Degree and Field of Study

Full name: Master of Science (Construction Project Management)
Abbreviation of name: M.Sc. (Construction Project Management)

Major

None

Total Number of Credits

Plan A1 equivalent of 36 credits
 Plan A2 not less than 36 credits
 Plan B not less than 36 credits

Character of the Program

1. **Type of program:** Master's degree - 2 years
2. **Language medium:** Thai and/or English
3. **Student intake:** Thai and foreign students who are able to communicate in Thai and/or English
4. **Collaboration with other institutes:** This program is run exclusively by the organizing institute.
5. **Degree conferred:** Single degree

Career Opportunities after Graduation

1. Administrative personnel or project manager of construction project
2. Construction supervisor or foreman
3. Lecturer, professor at the level of tertiary education
4. Operator of a construction business
5. Other related professions such as building facilities manager, real estate development project manager, employee in construction company or construction management and supervision company or real estate development company.

Objectives of the Program

1. To produce graduates with responsible, moral and ethical qualities in the field of construction management that are in significant demand by the construction industry due to shortage within the country
2. To raise knowledge and understanding of management science for those involved in the construction business and industry
3. To raise the standard of professionalism for those involved in the construction business and industry to an international level
4. To encourage studies in the specialized field so as to create an identity for the program, the faculty, and the institution.

Eligibility to Apply

1. Applicants must possess one of the following qualifications
 - 1.1 A Bachelor's degree in Architecture, Engineering, or a construction-related field
 - 1.2 A Bachelor's degree in a similar or related discipline with minimum of 2 years construction-related working experience
 - 1.3 Other qualifications that do not fully conform with those specified however, may be taken into consideration at the discretion of the Program Operating Committee.
2. Possess the qualities stipulated under Article 7 of Silpakorn University Graduate Studies Regulations, 2023 and/or subsequent changes thereof.

Number of Credits

Plan A1	equivalent of 36 credits
Plan A2	not less than 36 credits
Plan B	not less than 36 credits

Structure of the Curriculum

Plan A1

Foundation course	non-credit	3 credits
Compulsory courses	non-credit	3 credits
Thesis	equivalent to	36 credits

Plan A2

Foundation course	non-credit	3 credits
Compulsory courses	a number of	15 credits
Elective courses	not less than	9 credits
Thesis	equivalent to	12 credits

Plan B

Foundation course	non-credit	3 credits
Compulsory courses	a number of	15 credits
Elective courses	not less than	15 credits
Independent Study	equivalent to	6 credits

Note: - Plans A1 and A2 do not require students to take Comprehensive Exam

- Plan B students are required to take Comprehensive Exam after having studied and passed all compulsory courses and fulfilled necessary course conditions.

Courses**Foundation course (non-credit)**

Students with inadequate fundamental background will be required by the Program Operating Committee to enroll in the non-credit course *263 500 Basic Building Design and Construction* that shall be evaluated in terms of S or U

Plan A1**Foundation Course (non-credit) 3 credits**

263 500	Basic Building Design and Construction	3*(3-0-6)
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Compulsory Course (non-credit) 3 credits

263 514	Research Methodology in Construction Project Management	3*(3-0-6)
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Thesis (equivalent to 36 credits)

263 520	Thesis	equivalent to 36 credits
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Note: * denotes non-credit courses that are evaluated in terms of S or U

Plan A2**Foundation Course (non-credit) 3 credits**

263 500	Basic Building Design and Construction	3*(3-0-6)
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Compulsory Courses (15 credits)

263 510	Real Estate Investment	3(3-0-6)
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263 511	Construction Documentation	3(3-0-6)
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263 512	Construction Management	3(3-0-6)
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263 513	Organization Management	3(3-0-6)
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263 514	Research Methodology in Construction Project Management	3(3-0-6)
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Elective Courses (not less than 9 credits)

263 530	Information System in Construction Project Management	3(3-0-6)
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263 531	Computer Application in Construction Project Management	3(3-0-6)
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263 532	Building Information Modelling for Construction Project Management	3(3-0-6)
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263 533	Property and Facility Management	3(3-0-6)
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263 534	Building Refurbishment Management and Techniques	3(3-0-6)
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263 535	Integration of Building Systems	3(3-0-6)
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263 536	Sustainable Construction	3(3-0-6)
263 537	Introduction to Operations Research	3(3-0-6)
263 538	Quality Management	3(3-0-6)

Note: * denotes non-credit courses that are evaluated in terms of S or U

Apart from the above electives, students may also choose to enroll in any other courses offered by other programs at the Graduate Level with the approval of the Program Operating Committee.

Thesis (equivalent to 12credits)

263 521	Thesis	equivalent to 12 credits
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Plan B

Foundation Course (non-credit) 3 credits

263 500	Basic Building Design and Construction	3*(3-0-6)
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Compulsory Courses (15 credits)

263 510	Real Estate Investment	3(3-0-6)
263 511	Construction Documentation	3(3-0-6)
263 512	Construction Management	3(3-0-6)
263 513	Organization Management	3(3-0-6)
263 514	Research Methodology in Construction Project Management	3(3-0-6)

Elective Courses (not less than 15 credits)

263 530	Information System in Construction Project Management	3(3-0-6)
263 531	Computer Application in Construction Project Management	3(3-0-6)
263 532	Building Information Modelling for Construction Project Management	3(3-0-6)
263 533	Property and Facility Management	3(3-0-6)
263 534	Building Refurbishment Management and Techniques	3(3-0-6)
263 535	Integration of Building Systems	3(3-0-6)
263 536	Sustainable Construction	3(3-0-6)
263 537	Introduction to Operations Research	3(3-0-6)
263 538	Quality Management	3(3-0-6)

Note: * denotes non-credit courses that are evaluated in terms of S or U

Apart from the above electives, students may also choose to enroll in any other courses offered by other programs at the Graduate Level with the approval of the Program Operating Committee.

Independent Study (equivalent to 6 credits)

263 522	Independent Study	equivalent to 6 credits
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Study Plans

Plan A1

Year 1 Semester 1

Course No.	Course Title	Credits (L-P-E)
263 500	Basic Building Design and Construction	3*(3-0-6)
263 520	Thesis (equivalent to)	6
Total		6

Year 1 Semester 2

Course No.	Course Title	Credits (L-P-E)
263 514	Research Methodology in Construction Project Management	3*(3-0-6)
263 520	Thesis (equivalent to)	6
Total		6

Year 2 Semester 1

Course No.	Course Title	Credits (L-P-E)
263 520	Thesis (equivalent to)	12
Total		12

Year 2 Semester 2

Course No.	Course Title	Credits (L-P-E)
263 520	Thesis (equivalent to)	12
Total		12

Note: * denotes non-credit courses that are evaluated in terms of S or U

Plan A2

Year 1 Semester 1

Course No.	Course Title	Credits (L-P-E)
263 500	Basic Building Design and Construction	3*(3-0-6)
263 510	Real Estate Investment	3(3-0-6)
263 511	Construction Documentation	3(3-0-6)
	Electives	6
Total		12

Year 1 Semester 2

Course No.	Course Title	Credits (L-P-E)
263 512	Construction Management	3(3-0-6)
263 513	Organization Management	3(3-0-6)
263 514	Research Methodology in Construction Project Management	3(3-0-6)
	Electives	3
Total		12

Year 2 Semester 1

Course No.	Course Title	Credits (L-P-E)
263 521	Thesis (equivalent to)	6
Total		6

Year 2 Semester 2

Course No.	Course Title	Credits (L-P-E)
263 521	Thesis (equivalent to)	6
Total		6

Note: * denotes non-credit courses that are evaluated in terms of S or U

Plan B

Year 1 Semester 1

Course No.	Course Title	Credits (L-P-E)
263 500	Basic Building Design and Construction	3*(3-0-6)
263 510	Real Estate Investment	3(3-0-6)
263 511	Construction Documentation	3(3-0-6)
	Electives	6
Total		12

Year 1 Semester 2

Course No.	Course Title	Credits (L-P-E)
263 512	Construction Management	3(3-0-6)
263 513	Organization Management	3(3-0-6)
263 514	Research Methodology in Construction Project Management	3(3-0-6)
	Electives	3
Total		12

Year 2 Semester 1

Course No.	Course Title	Credits (L-P-E)
263 522	Independent Study (equivalent to)	3
	Electives	3
Total		6

Year 2 Semester 2

Course No.	Course Title	Credits (L-P-E)
263 522	Independent Study (equivalent to)	3
	Electives	3
Total		6

Note: * denotes non-credit courses that are evaluated in terms of S or U

Course Descriptions

263 500	Basic Building Design and Construction <i>Non-credit course with evaluation in terms of S or U</i> Fundamentals of architectural and engineering design; analyzing various types of problems in design and construction through discussions and seminars.	3(3-0-6)
263 510	Real Estate Investment Overview of construction business and industry; fundamentals of economics and applications to real estate projects; project feasibility study and design management; entrepreneurial skills.	3(3-0-6)
263 511	Construction Documentation Procurement system; construction and contract documentation; types of contracts, biddings, contractor selection, contract management and dispute resolution. Field trips required.	3(3-0-6)
263 512	Construction Management Principles of construction management; planning, controlling and monitoring scope of construction work, safety, time, cost and quality. Field trips required.	3(3-0-6)
263 513	Organization Management Types of organizations; developing visions, missions, strategic goals, objectives, and plans; organization and human resource management.	3(3-0-6)
263 514	Research Methodology in Construction Project Management <i>Plan A1 students to be evaluated in terms of S or U</i> <i>Plan A2 and Plan B students to be evaluated in terms of grades</i> Introduction to basic and advanced research methodologies; unique characteristics of research in construction project management; presentation and discussion on topics of interests; research proposal preparation; data gathering, research tools, information technology, data analysis, interpretation.	3(3-0-6)
263 520	Thesis Individual research on a topic concerning construction project management; demonstrating abilities in systematic thinking and data analysis; explaining connection between theory and practice; presenting accountable study results; work to be carried out under the supervision of a thesis supervisor.	equivalent to 36 credits

- 263 521 Thesis** **equivalent to 12 credits**
Prerequisite: Research Methodology in Construction Project Management
 Individual research on a topic concerning construction project management; demonstrating abilities in systematic thinking and data analysis; explaining connection between theory and practice; work to be carried out under the supervision of a thesis supervisor.
- 263 522 Independent Study** **equivalent to 6 credits**
Prerequisite: Research Methodology in Construction Project Management
 Independent study on a topic concerning construction project management; demonstrating abilities in systematic thinking and data analysis under the supervision of an independent study supervisor.
- 263 530 Information System in Construction Project Management** **3(3-0-6)**
 Concepts of basic information system and practical applications to construction project management procedures; information system design and planning; construction control; system analysis, reporting and evaluation; information system for managerial analysis and executive decision-making.
- 263 531 Computer Applications in Construction Project Management** **3(3-0-6)**
 Basic knowledge of computer applications in construction project management; use of computer technology in construction management process; examining software used in project planning, evaluation, and management; software selection and applications.
- 263 532 Building Information Modelling for Construction Project Management** **3(3-0-6)**
 Principles and theories of Building Information Modeling (BIM); BIM applications in design and construction project management and problem solving.
- 263 533 Property and Facility Management** **3(3-0-6)**
 Definitions of property and facility management; types of properties; portfolio management; role and responsibility of property and facility managers in construction business circle.
 Field trips required.
- 263 534 Building Refurbishment Management and Techniques** **3(3-0-6)**
 Principles of building refurbishment management; analyzing existing building conditions and feasibility study for refurbishment; processes and techniques in refurbishing obsolete buildings; cost and budget estimation and refurbishing technique proposal.
 Field trips required.

- 263 535 Integration of Building Systems 3(3-0-6)**
Integration of building system technologies in design and construction process which involves building envelope, structural system, heating, ventilation, and air-conditioning (HVAC) systems, sanitary system, lighting and electrical system, acoustic system, building automation system, and communication system, as well as interior and landscape design; guidelines and instruments for building system inspections.
Field trips required.
- 263 536 Sustainable Construction 3(3-0-6)**
Guidelines for environmentally friendly building construction project management and indoor environmental quality improvement; Thai and international methods for rating green buildings: TREES and LEED.
Field trips required
- 263 537 Introduction to Operations Research 3(3-0-6)**
Introduction to operations research; mathematical modeling techniques in managerial decision-making and applications for construction project management.
- 263 538 Quality Management 3(3-0-6)**
Basic concepts of quality management; techniques, applications and alternative approaches to quality management; internal and external factors affecting quality control processes; quality management planning.