

COLLEGE OF ENGINEERING

DEPARTMENT OF CIVIL ENGINEERING



MSc CPM PROGRAM

HANDBOOK

1446 A.H.

2024/2025 A.D.



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COLLEGE OF ENGINEERING, KING KHALID UNIVERSITY

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Master of Science in Construction Project Management

Welcome to MSc in Construction Project Management

We warmly congratulate you on your decision to pursue your educational goals at the Department of Civil Engineering, College of Engineering, King Khalid University. We would like to highlight our steadfast commitment to ensuring that your academic experience is not only successful but also enjoyable and rewarding.

We are deeply dedicated to supporting students in achieving their goals and dreams. Please do not hesitate to reach out to your faculty advisor or any of our experienced and knowledgeable faculty members for any assistance you may need.

1.1 An Overview

The Master of Science in Construction Project Management at King Khalid University is a specialized graduate program aimed at providing students with the critical skills and knowledge required to effectively manage construction projects, ensuring timely completion, adherence to budget, and the highest quality standards.

The program encompasses various aspects of construction project management, offering students the flexibility to customize their studies by choosing elective courses that match their research interests and career aspirations. The program is structured over 30 credit hours, which include:

- 6 credit hours dedicated to the thesis,
- 18 credit hours for mandatory courses (6 courses), and
- 6 credit hours for elective courses (2 courses).

This handbook has been developed with the guidance and oversight of the Development and Quality Unit (DAQU) to ensure it adheres to the highest academic standards. The content is aligned with the requirements of the National Center for Academic Accreditation and Evaluation (NCAAA), providing students with a comprehensive and well-organized learning experience.

1.2 Importance of Construction Project Management (CPM) in Saudi Arabia and the Aseer Region

Construction Project Management (CPM) plays a critical role in the ongoing development and expansion of infrastructure in Saudi Arabia, particularly within the Aseer region. As the country undergoes rapid urbanization and economic transformation under Vision 2030, the need for skilled professionals in construction project management has never been greater.

National Importance

Mega Projects: Saudi Arabia is home to several ambitious construction projects such as NEOM, The Red Sea Project, and Qiddiya, requiring advanced project management skills.

- Infrastructure Development: The demand for sustainable, high-quality infrastructure is increasing to support economic diversification, tourism, and smart city initiatives.
- Regulatory Compliance: With evolving building codes and environmental regulations, expertise in construction management is essential for ensuring compliance and efficiency.

Regional Importance (Aseer Region)

- Urban Development: Aseer is witnessing significant growth in its urban landscape, necessitating well-planned construction management strategies.
- Tourism & Hospitality Projects: As part of Saudi Arabia's tourism expansion efforts, Aseer is developing resorts, hotels, and recreational facilities, all requiring skilled project managers.
- Sustainable Construction: Given Aseer's unique geography and environmental sensitivity, sustainable construction practices and efficient project execution are crucial for long-term regional development.

By enrolling in the Master of Science in Construction Project Management, students will gain the expertise necessary to lead construction projects in Saudi Arabia and beyond, contributing to the nation's growth and modernization.

We welcome you to this transformative journey and look forward to supporting your academic and professional aspirations.

1. MSc CPM Program Vision statement:

The Construction Project Management program is a distinguished academic program foster towards quality education and scientific research thereby promoting a sustainable infrastructural development of the Kingdom

2. MSc CPM Program Mission statement:

Providing Construction Project Management Graduates with high level of competence in academic excellence, modern technology and scientific research, and service to the community

3. MSc CPM Program Goals:

- To equip graduates with diverse knowledge and skills that makes them capable of coping with the complex environment of construction project management
- To equip graduates for professional advancement, societal values, and leadership responsibility in their respective organizations
- To prepare graduates to pursue advanced degrees or seek professional certification in Construction Project Management or related field.
- To prepare graduates to actively participate in professional and scientific activities of the region relevant to Construction Project Management

4. MSc CPM Program Learning Outcomes:

Knowledge and Understanding:

Acquire a deep understanding of the principles and practices of construction project

- K1 management, including project planning, scheduling, cost estimation, risk management, and sustainable construction, eco-friendly practices
- K2 Understanding QA/QC processes and construction laws ensures ethical, legal, and highquality project delivery

Skills:	
S1	The ability to conduct research, analyze data, and apply critical thinking skills to solve complex construction project management problems.
S2	Synthesize cutting-edge project management methodologies, economic analysis, and multidisciplinary team leadership to drive technological innovation and sustainability in construction practices.
S3	Create accurate cost estimates and budgets for construction projects, considering materials, labour, equipment, and overhead costs.
S4	Identify, assess, and mitigate risks associated with construction projects to minimize disruptions and cost overruns.
S5	Effective oral and written communication skills for interacting with stakeholders, clients, contractors, and project teams.

Demonstrate their ability to apply their knowledge by creating comprehensive project
 plans, monitoring progress, and implementing necessary adjustments to ensure
 projects are completed on time and within budget

Values, Autonomy, and Responsibility:

Recognize ethical and professional obligations in construction project management
 V1 scenarios and adhere to the ethical standards and professional norms of the field to make informed decisions.

V2 Engage in lifelong learning and professional development in the field of construction project management.

5. Student Admission Requirements:

Admission Requirements

To be admitted into the Master of Science in Civil Engineering program at King Khalid University, applicants are required to hold a bachelor's degree in engineering with a very good grade (GPA of 3.5/5.0 or equivalent) from a recognized university in Saudi Arabia. If the degree is obtained from an institution outside the Kingdom, it must be officially recognized and equivalent to the Saudi standards as approved by the university degree equivalency committee at the Ministry of Education. The applicant must be a Saudi national, or if non-Saudi, hold an official graduate scholarship to study in Saudi Arabia. Additionally, applicants who are employed must provide formal approval from their employer, indicating that they are permitted to pursue the degree. All required documents, as specified by the Deanship of Graduate Studies, must be submitted within the deadline. Payment of the prescribed tuition fees is required before the start of the study, as per the deadlines set by the Deanship. Applicants are also required to pass national eligibility tests. Moreover, applicants must demonstrate proficiency in the English language, with a minimum TOEFL-iBT score of 64 or an equivalent score on another approved English proficiency test. These criteria ensure that the program admits students with strong academic backgrounds, professional preparedness, and language skills necessary for successful completion of the graduate degree.

Master Students admission rules and transfer requirements and course equivalence are given in the deanship of postgraduate studies website.

https://dps.kku.edu.sa/

https://engineering.kku.edu.sa/en/content/2876

Online Application and Procedures

Required documents to be uploaded while completing the application on the university website (<u>https://kku.edu.sa/</u>):

- Bachelor's degree certificate for those applying to master's programs.
- Academic transcript.
- National ID for Saudi citizens.
- A valid passport copy (with at least one year of validity) for international applicants, including those from GCC countries.

A valid passport copy (with at least one year of validity) and a residence permit for scholarship students applying for internal scholarships (non-Saudi applicants).

Guide of University admission (Guide of University admission) and

Student Admission Rules and Regulations (Student Admission Rules and Regulations;

Electronic Form KKU Electronic Admission Forms

Fees and Payment

- Tuition fees for the CE MSc CPM program are 72,000riyals (Eighty thousand Saudi riyals), paid as 4 payments of 18,000 riyals (Ten thousand Saudi riyals) before the beginning of each semester.
- Tuition fees for one supplementary semester are 5,000riyals (five thousand Saudi riyals).
- Tuition fees when exceeding the regular duration of study at the master's level 5,000 (five thousand) riyals per semester.

Policies and Procedures for Student Transfer

The program features fair and endorsed transfer policies and processes. The policies and processes for transferring students from either outside the Program or within its many disciplines were modified by the Graduate Study Committee. At the council meeting on February 18, 2020, the department approved the updated policies. These guidelines are listed on the Department website and in the Graduate Student Handbook https://drive.google.com/drive/folders/12-j1qQZ7JlaB0bLVrXRsUghcY61eokN-. Additionally, the program fairly considers and approves requests from all students to drop courses or semesters in accordance with the policies and guidelines during Council sessions.

Visiting Students

Visiting Students from King Khalid University to Another Institution

- Students must have completed at least one semester and have an academic record with a cumulative GPA before applying as a visiting student.
- The host institution must be an accredited university or college.
- Students must submit a description of the intended courses for approval, ensuring alignment with King Khalid University's curriculum.
- The courses taken must match in content and credit hours with those offered at King Khalid University.
- A maximum of 20% of the total graduation credits can be transferred from another university.
- Grades from the host university will not be factored into the cumulative GPA but will be documented in the academic record.
- Students must submit their academic results to the Deanship of Admission and Registration within a week of resuming study at King Khalid University.
- The maximum duration for studying as a visiting student is two semesters.

Students from Other Universities Visiting King Khalid University

- Visiting students from other universities must obtain course descriptions from King Khalid University for approval by their home institution.
- The selected courses should align in credit hours and content with those at the home university.
- Course registration will be managed by the relevant authority within the University/College.
- Upon completion, students will receive an official letter detailing their academic performance in the studied courses.

6. REGISTRATION

Register System and Registration Guidelines

The E-Register system (Academia) at King Khalid University enables MSc students to manage their academic activities, including course registration, adding or dropping courses, withdrawing, processing payments, and requesting balance refunds. It is crucial that students complete their required payments before the specified deadline; otherwise, they risk being dropped due to non-payment.

Registration Guidelines

- All students must log in to the E-Register system to complete their registration.
- Late registration begins on the first day of classes as per the college's academic calendar and continues until the deadline for adding courses.
- Students are allowed to register for a minimum of 9 or maximum 12 credit hours per semester.
- Students must adhere to the timelines for registration, course addition, course withdrawal, and other academic activities as outlined in the academic calendar.

Registration Steps

- 1. Settle tuition fees (waived for scholarship students).
- 2. Complete online registration through the E-Register system.

Add/Drop Policies

Students are permitted to add or drop courses without incurring any penalties during the first two weeks of the semester. Course modifications can be made through the E-Register system via their university account or by submitting a signed request to the department. It is strongly recommended that students consult their academic advisors before making course changes.

Withdrawal Policy

Students may withdraw from individual courses or all enrolled courses until the end of the 14th week of the semester without academic penalties, provided they meet the eligibility criteria established by the Deanship of Graduate Studies. Withdrawn courses will be marked as a "W" (Withdrawn) on the student's transcript. After the 14th week, students will receive grades based on their performance in the registered courses.

7. Curriculum

1. Curriculum Structure:

Program Structure	Required/ Elective	No. of courses	Credit Hours	Percentage
Course	Required	6	18	60
Course	Elective	2	6	20
Graduation Project (if any)		-	-	
Thesis (if any)		1	6	20
Field Experience (if any)		-	-	
Total		9	30	100

2. Program Courses:

Level	Course Code	Course Title	Required or Elective	Pre- Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
	CE781	Construction Planning and Control	Required	NA	3	Program
Level	CE782	Quality Project Management	Required	NA	3	Program
	CE783	Research Methodology	Required	NA	3	Program
Level 2	CE784	Construction Contracts and Procurement	Required	NA	3	Program
	CE785	Risk management in construction	Required	NA	3	Program
	CE786	Project Financial Management	Required	NA	3	Program
	CE799	Master's thesis	Required	NA	3	Program
Level	CEXXX	Elective 1	Elective	NA	3	Program
3	CEXXX	Elective 2	Elective	NA	3	Program
Level 4	CE799	Master's thesis	Required	NA	3	Program

* Include additional levels (for three semesters option or if needed).

** Add a table for the courses of each track (if any)

Elective 1

Choose one course among the list below

Level	Course Code	Course Title	Required or Elective	Pre- Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
Level 3	CE 787	Computer applications in construction	Elective	NA	3	Program
	CE 788	Value Engineering	Elective	NA	3	Program
	CE 789	Infrastructure Development and Management	Elective	NA	3	Program

Elective 2

Level	Course Code	Course Title	Required or Elective	Pre- Requisit e Courses	Credit Hours	Type of requirement S (Institution, College, or Program)
Level 3	CE 790	Quality and Safety in Construction	Elective	NA	3	Program
	CE 791	Sustainable Materials and Green Buildings	Elective	NA	3	Program
	CE 792	Building Services and Maintenance Management	Elective	NA	3	Program
	CE 793	Construction Practices and Equipment	Elective	NA	3	Program

Choose one course among the list below

8. Courses Description

Construction Planning and Control (CE781)

Covers construction planning fundamentals, scheduling techniques, and project control. Introduces management tools for time-cost optimization, resource allocation, risk analysis, and project monitoring using deterministic and probabilistic approaches. Focuses on practical applications, including earned value management, precedence diagramming, and uncertainty analysis in construction schedules.

Quality Project Management (CE782)

Explores quality management principles, quality assurance, and control strategies in construction. Covers TQM, Six Sigma, benchmarking, statistical quality control, audits, and compliance with industry standards. Emphasizes continuous improvement, cost of quality, and leadership strategies for maintaining high-quality construction projects.

Research Methodology (CE783)

Introduces research principles, problem identification, literature review, data collection methods, statistical analysis, and research design. Covers qualitative and quantitative techniques, hypothesis testing, ethical considerations, and scientific writing. Prepares students for

conducting independent research and developing structured academic reports in construction and project management.

Construction Contracts and Procurement (CE784)

Examines construction contract types, bid preparation, procurement strategies, and dispute resolution mechanisms. Covers legal frameworks, contract administration, risk allocation, and claims management. Provides insights into international contracting practices, tendering processes, negotiation techniques, and regulatory compliance in construction project procurement.

Risk Management in Construction (CE785)

Focuses on identifying, analyzing, and mitigating construction project risks. Covers qualitative and quantitative risk assessment, risk allocation through contracts and insurance, and decision-making under uncertainty. Explores risk modeling, financial risk strategies, and international joint venture challenges to enhance project resilience.

Project Financial Management (CE786)

Covers financial principles in construction, including cost control, budgeting, cash flow management, financial risk assessment, and investment strategies. Discusses project financing, time value of money, financial statement analysis, and depreciation. Focuses on optimizing financial performance and managing financial risks in construction projects.

Computer Applications in Construction (CE787)

Introduces construction management software applications, including MS Excel and MS Project. Covers project scheduling, cash flow analysis, document management, financial modeling, and digital tools for construction planning. Emphasizes data-driven decision-making and automation for efficient project execution.

Value Engineering (CE788)

Focuses on systematic value improvement and cost reduction in construction projects. Covers functional analysis, alternative evaluation, decision matrices, and FAST diagramming. Explores value engineering methodologies for optimizing project costs without compromising performance, quality, or sustainability.

Infrastructure Development and Management (CE789)

Examines planning, financing, and maintenance of infrastructure projects. Covers sustainability, regulatory policies, lifecycle cost analysis, risk assessment, and smart infrastructure solutions.

Highlights interdisciplinary collaboration in developing resilient, efficient, and sustainable infrastructure systems.

Quality and Safety in Construction (CE790)

Covers construction safety management, accident prevention, quality control, and regulatory compliance. Discusses TQM, ISO standards, OSHA regulations, safety audits, risk mitigation, and emergency response planning. Focuses on integrating quality and safety for efficient project execution.

Sustainable Materials and Green Buildings (CE791)

Explores sustainable construction practices, eco-friendly materials, energy efficiency, and green building certifications like LEED and BREEAM. Covers carbon footprint reduction, life cycle assessment, renewable energy integration, and sustainability frameworks in construction.

Building Services and Maintenance Management (CE792)

Focuses on building maintenance strategies, equipment management, life cycle cost analysis, risk assessment, and emergency response planning. Covers maintenance contracts, cost-effective operation, and sustainable maintenance practices for efficient building performance.

Construction Practices and Equipment (CE793)

Introduces construction techniques, equipment selection, and site operations. Covers earthwork, material handling, concrete and asphalt plants, and specialized equipment. Emphasizes efficient construction processes, equipment maintenance, and project execution strategies.

Master's Thesis (CE799)

Develops research skills through independent study in construction management. Covers problem formulation, literature review, data collection, analysis, and technical report writing. Focuses on developing expertise in solving complex engineering problems using research methodologies.

9. Graduation & Grades Rule and Regulations

- Semester/Level Grade Point Average (GPA): This represents the average of total grade points accumulated across all academic courses, divided by the total number of credit hours for a specific semester. Grade points are determined by multiplying each course's credit hours by the assigned point weight.
- **Cumulative Grade Point Average (CGPA):** The CGPA is calculated by dividing the total accumulated grade points by the total number of credit hours completed across all semesters.
- Grade Reports: Semester grade reports are not sent to students by mail. Instead, final semester grades are typically accessible online. Students can check their grades by logging into the Academia (E-register) system.
- **Grade Breakdown:** The grading system, including grade classifications and their corresponding descriptions, is detailed in Below table

Marks	Grade	Points	GPA
95 – 100	A+	5.00	4.75 - 5.00
90 – 94	A	4.75	4.50 - < 4.75
85 – 89	B+	4.50	4.25 - < 4.50
80 - 84	В	4.00	3.75 - < 4.25
75 – 79	C+	3.50	3.25 - < 3.75
Below 75	F	3.00	2.75 - < 3.25

10. Academic Progression, Disruption and Dismissal

10.1 Academic Progression

Students enrolled in the MSc in Construction Project Management (CPM) at King Khalid University must maintain a minimum Grade Point Average (GPA) of 3.75 out of 5. Additionally, each student must have an academic advisor upon enrollment to guide their studies, assist in selecting a course plan, research topic, and help develop a research plan in accordance with the program requirements set by the Deanship of Graduate Studies. Students are required to adhere to all policies and procedures related to credit hour completion and graduation requirements, where applicable.

10.2 Attendance

Students are expected to attend all scheduled classes and actively engage in discussions. The maximum allowable absence should not exceed 25% of the total classes.

10.3 Disruption

King Khalid University upholds the principle that freedom is accompanied by order, discipline, and responsibility. The university is committed to ensuring that all students can pursue their academic goals without interference. Therefore, any attempt by individuals or groups to disrupt the regular academic and administrative operations of the university will not be tolerated.

Any action that obstructs the conduct of classes, disrupts the university's educational mission, or interferes with approved university events constitutes a violation of academic integrity and student rights. Any such attempts will result in disciplinary measures, including legal action or expulsion.

Students found responsible for disruption, or any attempts thereof will be subject to university disciplinary actions, which may include probation, suspension, or dismissal. Disruptive behavior includes any act that obstructs or interferes with lectures, university operations, or authorized university events. An individual who deliberately takes actions toward causing disruption is also subject to disciplinary measures.

10.4 Dismissal from the University

A student may face dismissal from the university under the following circumstances:

- Receiving three academic warnings due to a cumulative GPA falling below 3.75 out of 5.
- Failing to complete graduation requirements within the maximum time frame, which is 1.5 times the standard duration of the program.
- Exceeding six academic semesters without fulfilling graduation requirements, unless granted an exceptional extension by the Department of Civil Engineering Council and College Council.
- Demonstrating a lack of commitment to academic progress, as determined by the College Council, which may lead to termination of enrollment.

11. Code of Conduct

The policies and guidelines that regulate the conduct and interactions of administrative staff, faculty, and students aim to uphold the highest academic and ethical standards, ensuring that the objectives of the MSc. CPM program at King Khalid University are successfully achieved.

6.1 Academic Misconduct

MSc students are expected to demonstrate professionalism and responsibility in all academic and departmental activities. Any act of cheating, plagiarism, dishonesty, violation of course regulations, copyright infringement, or damage to university property and resources constitutes a breach of the Code of Student Ethics. If a faculty member or university official determines that a student has engaged in unprofessional conduct, disciplinary actions will be enforced. These may include, but are not limited to, receiving a failing grade on the assignment, failing the course, or expulsion from the program. The MSc. CPM program and the Postgraduate Studies Department will jointly assess the severity of the violation. However, students have the right to appeal to the department in writing, stating the reasons for their appeal.

6.2 Cheating

Cheating refers to the unauthorized use or provision of assistance, materials, information, study aids, or electronic devices in any academic context. Academic exercises include all coursework submitted for assessment or credit. Examples of cheating include:

- Using or attempting to use unauthorized books, notes, electronic devices, calculators, or any other materials during an academic exercise without the instructor's approval.
- Copying or attempting to copy another student's work, such as reports, lab assignments, computer programs, or any other academic materials.
- Taking an examination, test, or quiz on behalf of another student or allowing someone else to take it on one's behalf.
- Conducting research, preparing assignments, or completing projects for another student without faculty approval.
- Altering grades, scores, or responses on returned exams or graded assignments to gain credit.

6.3 Plagiarism

Plagiarism is defined as presenting someone else's work—whether written by a fellow student, extracted from books, or obtained from other sources—as one's own. King Khalid University uses iThenticate (<u>https://app.ithenticate.com/en_us/folder</u>): Plagiarism Detection Software to verify the

originality of academic work and ensure compliance with ethical research practices. Plagiarism includes, but is not limited to:

- Submitting coursework, assignments, or projects completed by someone else or obtained from a commercial writing service.
- Copying another person's words verbatim without using quotation marks and failing to properly cite the source in references or footnotes.
- Paraphrasing or summarizing another person's work without proper acknowledgment in references or citations.

6.4 Intellectual Property

King Khalid University is committed to protecting and commercializing intellectual property (IP) through its dedicated center for innovation and intellectual property management (WEBLINK). This center oversees the entire lifecycle of IP protection, including copyrights, trademarks, trade secrets, and patents. It also facilitates the transfer of technology to industry partners or inventor-led startups while promoting the advancement of technology readiness.

12. Thesis and Its Requirements

12.1 Requirements/Conditions for Thesis Registration:

— Completion of Credit Hours:

The student must successfully complete 18 credit hours of coursework before being eligible to register for the Master thesis.

— Timely Registration:

The thesis registration process must occur at the beginning of the third semester, as the thesis work spans over two semesters (third and fourth).

12.2. Thesis Timeline and Progress:

- Two-Semester Thesis Work:
 The thesis work extends across two semesters (third and fourth).
- Continued Grade in Third Semester:
 By the end of the third semester, the student is granted a continued grade based on their progress.
- Final Grade in Fourth Semester:
 The final grade is awarded at the end of the fourth semester after successfully submitting and presenting the thesis to the examiners.

12.3. Thesis Failure and Extension:

— One-Semester Extension:

If the student fails to complete the thesis in the fourth semester, they are granted a onesemester extension to complete and submit the thesis.

Re-evaluation after Extension:
 The student must present the thesis to the evaluation committee by the end of the extended semester for re-evaluation.

12.4. Thesis Submission Requirements:

The Master thesis must include the following components:

- Introduction: Overview and background of the research topic.
- Literature Survey: Comprehensive review of existing studies and literature related to the research topic.
- Problem Definition and Significance of Research: Clear identification of the research problem and explanation of its importance to the field.
- Research Objectives: Specific goals the research aims to achieve.
- Research Methodology: Detailed explanation of the methods and techniques used for conducting the research.
- Results and Discussions: Presentation of the research findings and an in-depth discussion on their implications.
- Conclusions and Recommendations: Summary of key findings and proposed recommendations based on the research.
- References: Proper citation of all referenced literature and sources.

12.5. Controls, Responsibilities, and Procedures of Scientific Guidance:

- Thesis Supervisor: Each student must have a designated thesis supervisor from the faculty, responsible for providing guidance throughout the thesis development process.
- Regular Progress Meetings: Students are required to meet regularly with their supervisor to discuss progress, address challenges, and receive feedback on their work.
- Mid-Semester Reviews: At the midpoint of each semester, students must submit a progress report to the supervisor to ensure alignment with the thesis objectives and timeline.
- Thesis Defence Preparation: The supervisor will assist in preparing the student for the thesis defence, ensuring that all aspects of the research are thoroughly covered and ready for presentation.
- Submission Deadlines: Students must adhere to deadlines set by the university for submitting drafts, final reports, and scheduling the defence presentation.
- Evaluation Committee: The thesis will be evaluated by a committee of faculty members, who will assess the research quality, methodology, and contribution to the field before awarding the degree.

13. Scientific Supervision

13.1. Selection of the Academic Supervisor

The academic supervisor for a master's thesis in CPM must be a faculty member from the Civil Engineering department with expertise in Construction Project Management or related fields, holding a Ph.D. and having proven experience in guiding research or industry-related studies. Faculty members from other departments or external experts may be co-supervisors, subject to department approval, particularly for multidisciplinary thesis topics. Supervisors are assigned at the start of the third semester, and their selection is based on the alignment of their expertise with the student's research interests and the specific scope of the thesis project, with the option for co-supervision if necessary.

13.2. Responsibilities of the Supervisor

The supervisor is responsible for providing academic guidance throughout the research process, ensuring the student adheres to the thesis standards and objectives. This includes helping the student define the research problem, objectives, and methodology, aligning the work with real-world construction project scenarios. The supervisor must regularly monitor the student's progress, offering constructive feedback on thesis drafts, research methodology, and data analysis, while ensuring milestones such as field studies, feasibility analyses, construction design, and cost estimation are met within set timelines. Additionally, the supervisor fosters professional development by encouraging career-oriented research that addresses real-world challenges, such as feasibility studies and cost analysis. As the thesis defense approaches, the supervisor assists in preparing the student for the oral presentation, ensuring they can effectively present their research findings, and guides the student in creating a comprehensive project report covering all aspects of the construction project.

13.3. Mechanisms of Scientific Supervision and Follow-up

The supervisor and student are required to schedule regular meetings, either weekly or bi-weekly, to discuss research progress, address challenges, and provide ongoing feedback. These meetings should encompass all key aspects of the thesis, including construction engineering, project feasibility, economic aspect, and operational process. Additionally, students must submit periodic progress reports, such as mid-semester reviews, to track their research advancement and ensure alignment with thesis objectives and timelines. The supervisor will review these reports, offering detailed feedback and suggestions for improvement. A formal mid-semester evaluation will also be conducted

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to assess the student's progress in areas like field studies and project work, ensuring the thesis is on track for timely completion. By the end of the fourth semester, the student will finalize a comprehensive thesis report under the supervisor's guidance, covering all essential components. The supervisor will further assist the student in preparing for the final oral presentation, ensuring they are confident in presenting and defending their work before the evaluation committee.

13.4. Evaluation and Defense

At the end of the fourth semester, the student will submit the final thesis report, which must include all essential components such as field studies, feasibility analyses, construction project, analysis, and overall project evaluation. Following the submission, the student will present their thesis work before an evaluation committee in a formal oral examination. During this examination, the committee will assess the student's thesis report, presentation, and oral defense based on their depth of knowledge, technical accuracy, and the practical application of construction project management principles.

13.5. Responsibilities of the Student

The student is expected to actively engage in the research process, adhering to deadlines, and responding to feedback from the supervisor(s). They must ensure the thesis work is comprehensive, covering all required areas: field studies, feasibility analysis, engineering design, project costing, and overall project management. The student is responsible for maintaining academic integrity by ensuring originality, avoiding plagiarism, and conducting ethical research. They must respect confidentiality, intellectual property, and meet deadlines while demonstrating professionalism. Ethical decision-making and consideration of environmental and social impacts are also key obligations throughout the research and thesis process.

14. Thesis Defense/Examination:

The selection of the examination committee for a Master's thesis in CPM follows a structured process to ensure a balanced and qualified evaluation. The examination committee must consist of at least three members: the student's thesis supervisor, along with two other qualified faculty members from the Civil Engineering department or closely related fields. If the thesis covers multidisciplinary or industry-specific topics, the department may approve the inclusion of an external examiner, provided that the examiner has relevant academic or industry experience. All committee members are required to hold a Ph.D. and demonstrate expertise in construction project management or civil engineering. The committee's composition must be formally approved by the department head to confirm that the student's work will be evaluated by an appropriate and knowledgeable panel.

In order to proceed to the thesis defence, the student must first fulfil several requirements. They must have successfully completed all required coursework, totalling 30 credit hours (including 6 credit hrs for thesis). Additionally, the student is required to submit their final thesis, which must include all key components such as field studies, feasibility studies, construction project analysis, and an overall project evaluation. This thesis must be submitted by the department's established deadline during the fourth semester. Furthermore, the student's supervisor must formally approve the thesis, ensuring that it meets the academic and research standards necessary to proceed to the defence stage. Without the supervisor's approval, the student cannot move forward with the defence.

Once the requirements are met, the examination procedures can commence. The examination must be scheduled in consultation with the department to ensure adequate time for the committee to thoroughly review the submitted thesis. During the defence, the student will give a formal presentation of their research, explaining the problem, objectives, methodology, findings, and conclusions. The presentation should also emphasize the practical application of their research within real-world construction project scenarios. Following the presentation, the committee will conduct an oral examination, where the student will answer questions about the research methodology, project work, analysis, and conclusions. This segment assesses the student's depth of understanding, technical accuracy, and ability to apply construction project management principles to practical problems.

The approval process for the thesis is based on a pass/fail system, with no fixed grade assigned. After the oral examination, the committee will deliberate privately to discuss the student's performance. A unanimous or majority decision is required to pass the thesis. The committee's decision will be communicated to the student immediately after deliberation. If the student passes, they may be required to make minor revisions to the thesis before submitting the final version. Should the student fail the defence, detailed feedback will be provided, and they may be granted one additional semester to revise the thesis and resubmit it for defence.

The evaluation of the thesis is based on several key criteria. The committee will assess the technical accuracy and depth of the research, ensuring that the thesis demonstrates a high level of competence in civil engineering project, construction planning, and evaluation. The quality of the research

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methodology and its practical application to real-world construction scenarios are also critical elements of the evaluation. Additionally, the student's presentation skills and ability to clearly articulate complex concepts will be scrutinized, as effective communication is essential in the field of construction project management. Finally, the student's ability to respond to questions from the committee, reflecting their critical thinking and depth of understanding, is an important factor in determining the outcome of the defence.

This structured process ensures that the thesis defence is conducted fairly and rigorously, with clear expectations for both the student and the committee. By focusing on the practical application of project management principles and maintaining high academic standards, the defence process validates the student's readiness to enter the field of construction project management with a Master's degree

15. Learning Resources, Facilities, and Equipment

King Khalid University provides state-of-the-art facilities and equipment that cater to the academic and research needs of students in the Master of Civil Engineering program. These facilities are designed to enhance learning, foster research, and provide hands-on experience, ensuring that students are equipped with the tools necessary for both academic and professional success.

15.1. Library

The university's library offers a comprehensive collection of textbooks, research journals, and reference materials specifically tailored to the civil engineering discipline. The library also provides access to digital databases and online journals, allowing students to explore cutting-edge research in civil engineering and related fields. With an extensive range of e-learning resources and web-based tools, students have the flexibility to access learning materials both on and off campus. The library's facilities include quiet study areas, group workspaces, and access to computer terminals for research purposes.

15.2. Laboratories

The Civil Engineering department is equipped with specialized laboratories that provide practical, hands-on learning experiences which may assist to the CPM thesis. These include:

• Structural Engineering Lab

- Geotechnical Engineering Lab
- Environmental Engineering Lab
- Hydraulics and Fluid Mechanics Lab
- Geomatics
- Dynamic structure Lab
- Water Resources Engineering Lab
- Transportation Lab

15.3. Classrooms

The classrooms at College of Engineering, King Khalid University are designed to create a conducive learning environment, equipped with modern audio-visual systems, smart boards, and multimedia tools to support interactive teaching. The classrooms are spacious and equipped with high-speed Wi-Fi, allowing students to access digital resources and participate in collaborative learning activities. The infrastructure supports both traditional lectures and group-based learning, encouraging a dynamic and engaging learning experience.

15.4. Civil Engineering Computer Lab

The Civil Engineering Computer Lab is a key facility for students in the program, equipped with advanced computers and the latest engineering software to support research and design projects. The lab features industry-standard software such as:

- AutoCAD for civil and structural design.
- SAP2000 for structural analysis.
- Project Libre and MS Project for project management and scheduling.
- Mendeley and SPSS
- ArcGIS Pro
- MATLAB for data analysis and simulation.

15.5 Dedicated Research Scholar Rooms

To support advanced research, College of Engineering at King Khalid University provides dedicated research scholar rooms exclusively for Master's students. These rooms offer a quiet, focused environment for in-depth research, literature review, and thesis writing. Each room is equipped with furniture infrastructure and access to online resources, creating a conducive space for independent scholarly work.

15.6. Conference Rooms and Meeting Rooms

The Civil Engineering department offers multiple conference rooms and meeting rooms designed to facilitate collaboration and group discussions. These spaces are equipped with presentation tools, projectors, and video conferencing equipment. Students can use these rooms to hold group meetings, collaborate on research projects, and present their work. Additionally, the conference rooms are used for hosting guest lectures, industry seminars, and faculty meetings.

15.7. Faculty Lounge

A dedicated faculty lounge provides a comfortable space for faculty members to relax and collaborate. It serves as a hub for informal meetings, discussions, and professional exchanges among the faculty, promoting a collegial atmosphere that benefits both students and staff. The lounge is equipped with amenities such as Wi-Fi and seating areas, ensuring a conducive environment for brainstorming and knowledge sharing.

These comprehensive facilities—including laboratories, computer labs, research scholar rooms, conference rooms, and collaborative spaces—ensure that Master's students in Civil Engineering at King Khalid University have access to the resources and infrastructure they need for academic success, innovative research, and professional development.

15.8. College Scientific Journal

The College of Engineering at King Khalid University oversees the quarterly publication of the King Khalid University Frontiers in Engineering and Built Environment (Open Access: Emerald Publishing). This Scopus-indexed journal welcomes contributions from faculty members as well as researchers from within and beyond the Kingdom of Saudi Arabia. All submissions undergo a rigorous peer-review process conducted by both national and international experts. Recognized for its academic quality, this journal is considered a reputable platform for publication, with its papers acknowledged by scientific councils across universities in Saudi Arabia for academic promotion. Additionally, Frontiers

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in Engineering and Built Environment (https://www.emeraldgrouppublishing.com/journal/febe) is another prestigious journal in the field, providing a distinguished venue for research dissemination in engineering and the built environment.

16: Healthy and safe learning environment

King Khalid University is committed to providing a healthy and safe learning environment for all students, faculty, and staff, with specific procedures tailored to the nature of each academic program, including the Master of Civil Engineering. These procedures align with university-wide health and safety regulations and are designed to address the unique risks and requirements of engineering and laboratory-based programs.

16.1. Safety Protocols in Laboratories and Workshops

Given the hands-on nature of civil engineering, the university has established stringent safety protocols for laboratories and workshops. All students and staff are required to:

- Attend safety training sessions before using any laboratory or workshop facilities.
- Wear appropriate personal protective equipment (PPE), such as lab coats, safety goggles, gloves, and hard hats, depending on the nature of the experiment or project.
- Follow standard operating procedures (SOPs) for using equipment and conducting experiments, which are clearly displayed in all laboratories.
- Utilize emergency shut-off systems for electrical equipment and chemical handling facilities.

Laboratories are regularly inspected to ensure compliance with safety standards, and safety officers are appointed to oversee lab operations, monitor hazards, and conduct routine safety drills.

16.2. Health and Safety in Classrooms and Public Spaces

Classrooms, lecture halls, and study areas are maintained according to strict health and safety guidelines:

- Ventilation systems are regularly serviced to ensure air quality, reducing the risk of respiratory issues.
- Classrooms and public areas are sanitized frequently, with particular attention to high-contact surfaces.

- Ergonomically designed furniture is provided to reduce strain during long study or lecture sessions, and the university ensures that seating arrangements allow for safe distancing when required.
- Emergency exits are clearly marked in all classrooms and public areas, with fire extinguishers and first-aid kits readily available.

16.3. Risk Management and Emergency Procedures

The university has implemented a comprehensive risk management strategy that includes emergency response plans:

- Evacuation drills are conducted regularly to ensure that students and staff are familiar with the procedures in case of fire, chemical spills, or other emergencies.
- First-aid stations are strategically located throughout the campus
- An emergency contact system is in place, allowing students to quickly alert security or medical personnel in case of an urgent situation.
- Security personnel patrol the campus to ensure a safe and secure environment, and the university maintains a 24-hour emergency hotline for immediate response

16.4. Health Services and Well-Being Support

The university offers access to on-campus King Khalid University hospital that provide medical consultations, emergency care, and mental health support. These services are available to address both physical and emotional well-being, which is essential for maintaining a healthy academic environment:

- Counseling services are available for students experiencing stress, anxiety, or other psychological challenges.
- Health awareness programs are organized to educate students and staff on maintaining physical and mental well-being, especially during exam periods and high-stress times.

16.5. Safe Use of Technology and Online Resources

For students engaged in remote learning or online research, the university ensures the safe use of technology:

- Cybersecurity protocols are in place to protect personal data and academic records.
- E-learning platforms are regularly monitored to ensure that they function without technical issues or disruptions that could impact the students' academic performance.
- Students are educated on safe internet practices to avoid phishing scams and online threats while using university resources.

17: Student Rights

17.1 Appeals

The MSc. CPM program at King Khalid University regularly reviews students' academic performance at least once per semester based on their results or reports. These reviews determine academic honors, probation status for underperforming students, and potential suspension or dismissal in accordance with postgraduate policies. Additionally, the program oversees disciplinary actions when necessary. Faculty members (Instructors/Supervisors) typically report cases through the online monitoring system to the Postgraduate Studies Vice dean office. Any allegations of academic misconduct are also formally documented. The Department of Civil Engineering Council discusses such matters and communicates its decisions to the Vice Dean of Graduate Studies for final approval.

17.2 Academic Rights of Graduate Students

Graduate students enrolled in the MSc. CPM program at King Khalid University have the following rights:

- Access and understand the graduate studies policies and procedures, available on the MSc.
 CPM program webpage and the Deanship of Graduate Studies website. These regulations cover objectives, degree requirements, admission and registration terms, withdrawal, postponement, dismissal, additional opportunities, thesis proposals, and final presentations.
- Receive an orientation session explaining postgraduate rules and regulations.
- Be assigned an academic advisor to assist with scheduling, academic guidance, and research progress to achieve the intended program objectives.
- Obtain an academic calendar detailing important dates and deadlines.
- Have a structured study plan, including both compulsory and elective courses.

- Receive course descriptions covering objectives, learning outcomes, schedules, grading criteria, assessment methods, and references.
- Retain the right to add or drop compulsory and elective courses.
- Access a directory of faculty members, their specializations, and research interests.
- Be assigned a research supervisor upon approval of the thesis proposal.
- Request a change of thesis supervisor by submitting a written justification.
- Receive one additional opportunity to improve grades over a semester if the student's GPA is below "Very Good" and they have received an academic warning.
- Request a deferral of admission for one or two semesters.
- Request a study deferment for up to two semesters by submitting a written justification.
- Ensure confidentiality in handling complaints.
- Seek resolution for any issues or challenges that may hinder academic progress.
- Receive the official graduation certificate upon fulfilling all degree requirements.

17.3 Disciplinary Issues

Both academic and non-academic violations fall under disciplinary regulations. Any student representing King Khalid University in off-campus academic or non-academic activities is also subject to these disciplinary measures in the event of a violation.

17.4 Academic Issues

Students have the right to challenge a faculty member's decision regarding their grades. The appeal process begins with a direct discussion—either orally or in writing—with the faculty member, explaining why the grade is believed to be incorrect or unfair. If the issue remains unresolved, the student may submit a written appeal to the department head. The case will then be reviewed in a meeting of the Department of Civil Engineering Council.

17.5 Student Complaints

All student complaints must be formally submitted in writing, including the complainant's name, and sent to either the department head or the Vice-Dean of Postgraduate Studies. Due to confidentiality

considerations, students are advised not to discuss academic concerns with MSc. CPM program administrators.

18. Faculty Members

Sl. No.	Faculty Name	Academic Rank	Specialization	Weblink about Research Activity	MSc. CPM Course Instructor/Thesis supervision
1	Dr. Mohammed Abdullah Dahim	Professor	Construction Engineering and Management	Dr. Mohammed Dahim (0000-0003-2377-0828) - ORCID	Course Instructor/Thesis supervision
2	Dr. Mohammed Jameel	Professor	Structure/Construction Engineering	Mohammed Jameel (0000-0001-5968-6623) - ORCID	Thesis supervision
3	Dr. Javed Mallick	Professor	Geoinformatics/Water Resources	javed mallick (0000-0002-6155-3720) - ORCID	Course Instructor/Thesis supervision
4	Dr. Saed Dhafer M. Alqadhi	Associate Professor	Transportation Engineering	Saeed Algadhi (0000-0001-5194-7614) - ORCID	No
5	Dr. Majed Al Subih	Associate Professor	Water Resources engineering	maied alsubih (0000-0001-8226-1682) - ORCID	No
6	Dr. Ibrahim Idrees A. Falqi	Associate Professor	Construction Project Management	<u>Ibrahim Falqi (0000-0002-9573-6728) - ORCID</u>	Course Instructor
7	Dr. Nabil Ben Kahla	Associate Professor	Structure/Construction Engineering	Nabil Ben Kahla (0000-0002-2483-3184) - ORCID	Course Instructor/Thesis supervision
8	Dr. Mohamed Hechemi Elouni	Associate Professor	Structure/Construction Engineering	Mohamed Hechmi El Ouni (0000-0002-2382-4905) - ORCID	Course Instructor/Thesis supervision
9	Dr. Mohd. Ahmed	Associate Professor	Structure/Construction Engineering	Mohd. Ahmed (0000-0002-1100-8724) - ORCID	Course Instructor/Thesis supervision
10	Dr. Mohd Abul Hasan	Associate Professor	Environmental Engineering	Mohd Abul Hasan (0000-0002-3467-8704) - ORCID	Thesis supervision
11	Dr. Yasser Alashker	Assistant Professor	Structure/Construction Engineering	Yasser Alashker (0000-0001-9580-2054) - ORCID	Course Instructor/Thesis supervision
12	Dr. Ahmad Babakar	Assistant Professor	Water Resources engineering	https://scholar.google.com/citations?user=EdtZPfEAAAAJ&hl=en	No
13	Dr. Abdullah Naser Asiri	Assistant Professor	Structure/Construction Engineering	https://orcid.org/0009-0000-8592-4314	Course Instructor/Thesis supervision
14	Dr. Essam Mohamad Althaqafi	Assistant Professor	Structure/Construction Engineering	https://orcid.org/0000-0002-3417-4792	Thesis supervision
15	Dr. Khaled Mohamed Khedher	Assistant Professor	Surveying/Geomatics	Khaled Mohamed Khedher - Google Scholar	No
16	Dr. Khalid Al Hadi	Assistant Professor	Structure/Construction Engineering	https://orcid.org/0000-0001-5976-5735	Course Instructor/Thesis supervision

17	Dr. Hamdi Alhadi Ayed	Assistant Professor	Water Resources/Hydraulics engineering	<u>Dr. Eng. Hamdi Ayed (0000-0001-6108-5093) - ORCID</u>	Course Instructor/Thesis supervision
18	Dr. Muhannad Riyadh Alasiri	Assistant Professor	Structure/Construction Engineering	https://orcid.org/0009-0007-4464-3680	Thesis supervision
19	Dr. Roohul Abad	Assistant Professor	Environmental Engineering	Roohul Khan (0000-0002-2329-4123) - ORCID	No
20	Dr. Dhafer Ali Alqahtani	Assistant Professor	Construction Engineering and Management	https://orcid.org/0000-0003-1675-2947	Course Instructor/Thesis supervision
21	Dr. Meshel Qablan Alkahtani	Assistant Professor	Geotechnical Engineering	Meshel Alkahtani (0009-0004-6673-5840) - ORCID	Course Instructor/Thesis supervision
22	Dr. Nadeem Ahmed Khan	Assistant Professor	Environmental Engineering	https://orcid.org/0000-0003-4366-9639	No
23	Dr. Abdullah Faiz Al Asmari	Assistant Professor	Transportation/ Construction Engineering	https://orcid.org/0000-0001-5949-8155	Course Instructor/Thesis supervision
24	Engr. Saiful Islam	Lecturer	Water Resources/Hydraulics engineering	Saiful Islam (0000-0002-5060-0018) - ORCID	No
25	Eng. Saad Khalid Saad Asiri	Teaching Assistant	Civil Engineering	-	No

19. Students Enrollment and Graduation statistics for Master Program -

Construction Project Management (CPM)



Students Graduated Since Last Three Years (Msc CPM in Civil Engineering)



20. College of Engineering Administration

Dean

Dr. Saed Dhafer M. Alqadhi

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Head of Department

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