

Certificate in Construction Project Management

Course outline

Module 1: Introduction to Construction Project Management

Module 1: Introduction to Construction Project Management is an introductory course designed to provide students with a comprehensive overview of the principles and practices of construction project management. It covers topics such as project planning, scheduling, budgeting, risk management, and quality control. Students will gain an understanding of the roles and responsibilities of the project manager, as well as the tools and techniques used to successfully manage a construction project.

Lessons

- Overview of Construction Project Management
- Project Planning and Scheduling
- Cost Estimation and Budgeting
- Risk Management
- Quality Assurance and Control
- Procurement and Contract Management
- Project Communication and Documentation
- Leadership and Team Building
- Project Closeout and Handover

After completing this module, students will be able to:

- Understand the fundamentals of construction project management, including the roles and responsibilities of the project manager.
- Develop an understanding of the project life cycle and the key stages of a construction project.
- Identify the key stakeholders involved in a construction project and the importance of effective communication.
- Develop an understanding of the different types of contracts used in construction projects and the legal and regulatory requirements.

Module 2: Construction Project Planning and Scheduling

Module 2 of the Certificate in Construction Project Management course focuses on the planning and scheduling of construction projects. It covers topics such as project planning, scheduling techniques, resource allocation, and risk management. Students will learn how to develop a project plan, create a project schedule, and manage resources to ensure successful project completion. Additionally, students will gain an understanding of the importance of risk management and how to identify and mitigate risks

associated with construction projects.

Lessons

- Introduction to Construction Project Planning and Scheduling
- Estimating and Cost Control
- Project Planning and Scheduling Techniques
- Risk Management in Construction Projects
- Quality Assurance and Control
- Project Management Software
- Construction Project Scheduling and Monitoring
- Construction Project Closeout and Handover
- Construction Project Management Best Practices
- . Legal and Regulatory Requirements for Construction Projects

After completing this module, students will be able to:

- Understand the fundamentals of project planning and scheduling, including the use of project management tools and techniques.
- Develop a project plan and schedule that meets the needs of the project stakeholders.
- Utilize project management software to create and manage project plans and schedules.
- Analyze and evaluate project plans and schedules to identify potential risks and areas of improvement.

Module 3: Construction Project Cost Estimation and Budgeting

Module 3 of the Certificate in Construction Project Management course focuses on the fundamentals of construction project cost estimation and budgeting. Students will learn how to develop accurate cost estimates and budgets for construction projects, as well as how to manage and control costs throughout the project life cycle. The module also covers topics such as cost analysis, risk management, and cost control techniques.

Lessons

- Introduction to Construction Project Cost Estimation and Budgeting
- Understanding the Cost Estimation Process
- Analyzing Construction Costs
- Estimating Labor Costs
- Estimating Material Costs
- Estimating Equipment Costs
- Estimating Overhead and Profit
- Estimating Contingency Costs
- Developing a Construction Budget
- . Managing Construction Costs
- . Risk Management in Construction Cost Estimation and Budgeting
- . Cost Control Strategies
- . Cost Reporting and Auditing
- . Advanced Cost Estimation Techniques

- . Case Studies in Construction Cost Estimation and Budgeting

After completing this module, students will be able to:

- Understand the principles of cost estimation and budgeting for construction projects.
- Develop accurate cost estimates for construction projects.
- Develop a comprehensive budget for construction projects.
- Utilize cost estimation and budgeting techniques to manage construction projects effectively.

Module 4: Construction Project Quality Management

Module 4 of the Certificate in Construction Project Management course focuses on Construction Project Quality Management. It covers topics such as quality assurance, quality control, and quality management systems. Students will learn how to develop and implement quality management plans, as well as how to monitor and evaluate the quality of construction projects. Additionally, students will gain an understanding of the importance of quality management in the construction industry.

Lessons

- Understanding Quality Management Principles in Construction Projects
- Quality Assurance and Quality Control in Construction Projects
- Quality Planning and Documentation in Construction Projects
- Quality Auditing and Inspection in Construction Projects
- Quality Risk Management in Construction Projects
- Quality Improvement Strategies in Construction Projects
- Quality Management Tools and Techniques in Construction Projects
- Quality Management Software in Construction Projects
- Quality Management and Regulatory Compliance in Construction Projects
- . Quality Management and Sustainability in Construction Projects

After completing this module, students will be able to:

- Understand the importance of quality management in construction projects.
- Develop a quality management plan for a construction project.
- Implement quality control processes and procedures.
- Monitor and evaluate the quality of construction projects.

Module 5: Construction Project Risk Management

Module 5 of the Certificate in Construction Project Management course focuses on Construction Project Risk Management. It covers topics such as identifying and assessing risks, developing risk management plans, and implementing risk management strategies. It also covers the use of risk management tools and techniques, and the importance of communication and collaboration in risk management.

Lessons

- Identifying and Assessing Project Risks
- Developing Risk Mitigation Strategies
- Establishing Risk Management Processes
- Implementing Risk Management Plans
- Monitoring and Controlling Risk
- Managing Risk in the Construction Industry
- Risk Management Tools and Techniques
- Risk Management and Quality Assurance
- Risk Management and Cost Control
- Risk Management and Contract Administration

After completing this module, students will be able to:

- Identify and assess potential risks associated with construction projects.
- Develop strategies to mitigate and manage risks.
- Develop a risk management plan for a construction project.
- Monitor and report on the progress of risk management activities.

Module 6: Construction Project Procurement and Contract Management

Module 6 of the Certificate in Construction Project Management course focuses on the procurement and contract management of construction projects. It covers topics such as the different types of contracts, the legal and ethical considerations of procurement, and the management of contracts. It also provides an overview of the different types of procurement methods and the best practices for managing contracts.

Lessons

- Understanding the Different Types of Construction Contracts
- Negotiating and Drafting Construction Contracts
- Risk Management in Construction Contracts
- Managing Contract Performance
- Dispute Resolution in Construction Contracts
- Contract Administration and Closeout
- Understanding the Different Types of Procurement Methods
- Prequalification of Contractors
- Bid Evaluation and Selection
- Contract Award and Execution

After completing this module, students will be able to:

- Understand the different types of procurement methods and their advantages and disadvantages.
- Develop an effective procurement strategy for a construction project.
- Analyze and evaluate construction contracts.
- Identify and manage risks associated with construction contracts.

Module 7: Construction Project Documentation and Reporting

Module 7 of the Certificate in Construction Project Management course focuses on the documentation and reporting of construction projects. Students will learn how to create and maintain project documentation, as well as how to effectively report on the progress of a project. They will also gain an understanding of the importance of accurate and timely documentation and reporting in order to ensure the successful completion of a project.

Lessons

- Understanding the Basics of Construction Project Documentation
- Developing a Construction Project Documentation Plan
- Creating and Maintaining Construction Project Documentation
- Analyzing and Interpreting Construction Project Documentation
- Using Construction Project Documentation to Make Decisions
- Understanding Construction Project Reporting Requirements
- Developing a Construction Project Reporting Plan
- Creating and Maintaining Construction Project Reports
- Analyzing and Interpreting Construction Project Reports
- . Using Construction Project Reports to Make Decisions

After completing this module, students will be able to:

- Understand the importance of project documentation and reporting in the construction industry.
- Develop the skills to create and maintain accurate and up-to-date project documentation.
- Learn how to effectively communicate project progress and performance to stakeholders.
- Develop the ability to analyze and interpret project data to identify potential risks and opportunities.

Module 8: Construction Project Safety Management

Module 8 of the Certificate in Construction Project Management course focuses on Construction Project Safety Management. It covers topics such as identifying and assessing safety risks, developing safety plans, implementing safety protocols, and monitoring safety performance. The module also provides an overview of relevant laws and regulations, as well as best practices for ensuring a safe and healthy work environment.

Lessons

- Introduction to Construction Project Safety Management
- Risk Assessment and Management
- Developing a Safety Plan
- Implementing a Safety Program
- Monitoring and Evaluating Safety Performance
- Safety Training and Education
- Emergency Preparedness and Response
- Legal and Regulatory Requirements
- Accident Investigation and Reporting
- . Construction Site Security

After completing this module, students will be able to:

- Understand the importance of safety management in construction projects.
- Develop and implement safety plans for construction projects.
- Identify and mitigate potential safety hazards on construction sites.
- Implement safety protocols and procedures to ensure the safety of workers and the public.

Module 9: Construction Project Stakeholder Management

Module 9 of the Certificate in Construction Project Management course focuses on Construction Project Stakeholder Management. It covers topics such as identifying stakeholders, understanding their interests and objectives, developing effective communication strategies, and managing stakeholder expectations. The module also provides guidance on how to manage conflicts between stakeholders and how to ensure that all stakeholders are kept informed throughout the project.

Lessons

- Identifying and Analyzing Stakeholders
- Developing Stakeholder Engagement Strategies
- Managing Stakeholder Expectations
- Communicating with Stakeholders
- Resolving Stakeholder Conflicts
- Managing Stakeholder Relationships
- Evaluating Stakeholder Satisfaction
- Managing Stakeholder Risk
- Implementing Stakeholder Engagement Plans
- . Measuring Stakeholder Performance

After completing this module, students will be able to:

- Understand the roles and responsibilities of stakeholders in a construction project.
- Develop effective strategies for engaging stakeholders in the project.
- Identify potential conflicts between stakeholders and develop strategies to resolve them.
- Develop effective communication plans to ensure stakeholders are kept informed of project progress.

Module 10: Construction Project Closeout and Handover

Module 10 of the Certificate in Construction Project Management course covers the process of closing out a construction project and handing it over to the client. It covers topics such as final inspections, punch lists, project documentation, and the transfer of ownership. It also covers the legal and contractual aspects of the project closeout process.

Lessons

- Understanding the Project Closeout Process
- Finalizing the Project Budget
- Finalizing the Project Schedule
- Finalizing the Project Quality
- Finalizing the Project Documentation
- Finalizing the Project Change Orders
- Finalizing the Project Risk Management
- Finalizing the Project Safety
- Finalizing the Project Communications
- . Finalizing the Project Procurement
- . Finalizing the Project Stakeholder Management
- . Finalizing the Project Claims
- . Finalizing the Project Dispute Resolution
- . Finalizing the Project Handover
- . Finalizing the Project Closeout Report

After completing this module, students will be able to:

- Understand the importance of project closeout and handover in the construction project management process.
- Develop a comprehensive closeout and handover plan for a construction project.
- Identify and manage the risks associated with project closeout and handover.
- Develop strategies for successful project closeout and handover.